

10/581761

AP20 Rec'd PCT/PTO 05 JUN 2006

78063.txt

## SEQUENCE LISTING

<110> Hellström, Mats  
Wallgard, Elisabet  
Kalén, Mattias

<120> ANGIOGENESIS-AFFECTING POLYPEPTIDES, PROTEINS, AND COMPOSITIONS,  
AND METHODS OF USE THEREOF

<130> 78063

<160> 52

<170> PatentIn version 3.2

<210> 1

<211> 736

<212> DNA

<213> Murinae gen. sp.

<400> 1

```
gtgatccagg atccgaagag gcccggagca ggagcatggc gtcgtcgggg tcggtgcagc      60
agctgccccct ggtgctgctg atgttgctgt tggcgagtgc ggcacgggcc agactctact      120
tccgctcggg ccagacttgc taccatccca ttcgcgggga ccagctggct ctgctggggc      180
gcaggactta tcctcggccg catgagtacc tgtccccagc ggatctcccc aagaattggg      240
actggagaaa tgtgaacggt gtcaactatg ccagcgtcac caggaaccag cacatcccac      300
agtactgtgg ttctgctggt gccacgggca gcaccagtgc catggcagac cgaatcaaca      360
tcaagaggaa aggtgcatgg ccctccatcc tgctgtccgt acagaatgtc attgactgtg      420
gcaatgctgg ctcttgtaga gggggcaatg accttccggt gtgggagtat gccacaagc      480
atggcatccc cgatgagacc tgcaacaact accaggcaag gaccaagact gtgacaagtt      540
taaccagtgt gggacctgca ctgaattcaa agagtgtcac accatccaga attacaccct      600
ctggagagtg ggtgattacg gtccctgtcc gggagggaga agatgatggc gagatctatg      660
ccaatgggtcc catcagctgc gggataatgg gcaccagaga tgatgtctaa ctacactggg      720
ggcatctatg ctgagc                                     736
```

<210> 2

<211> 1380

<212> DNA

<213> Murinae gen. sp.

<400> 2

```
aaaggaccgg gcggggcgct ccgagcgcgt gggcctgcgg gtcgggtcaa gaggtcgaag      60
gtgctgcgcg tgatccagga tccgaattgg cccggagcag gagcatggcg tcgtcgggggt      120
cggtgcagca gctgcccctg gtgctgctga tgttgctggt ggcgagtgcg gcacggggcca      180
gactctactt ccgctcgggc cagacttgct accatcccat tcgcggggac cagctggctc      240
tgctggggcg caggacttat cctcggccgc atgagtacct gtccccagcg gatctcccca      300
```

78063.txt

```

agaattggga ctggagaaat gtgaacggtg tcaactatgc cagcgtcacc aggaaccagc 360
acatcccaca gtactgtggt tcctgctggg cccacggcag caccagtgcc atggcagacc 420
gaatcaacat caagaggaaa ggtgcatggc cctccatcct gctgtccgta cagaatgtca 480
ttgactgtgg caatgctggc tcttgtgaag ggggcaatga ccttccggtg tgggagtatg 540
cccacaagca tggcatcccc gatgagacct gcaacaacta ccaggccaag gaccaagact 600
gtgacaagtt taaccagtgt gggacctgca ctgaattcaa agagtgtcac accatccaga 660
attacaccct ctggagagtg ggtgattacg gctccctgtc cgggagggag aagatgatgg 720
ccgagatcta tgccaatggt cccatcagct gcgggataat ggcaacagag atgatgtcta 780
actacactgg gggcatctat gctgagcacc aggaccaggc cgttatcaac cacatcatct 840
ctgtagctgg ctgggggtgtc agcaacgatg gcatcgagta ctggattgtc cgaaattcat 900
ggggcgaacc ctgggggtgag aaaggctgga tgaggatcgt gaccagcacc tacaaggag 960
gcacaggtga cagctacaac cttgccatcg agagtgcctg cacatttggg gacccattg 1020
tttaggtaga tgtctctgga agcagcgctg tgaacatga cagggagggg tgattaatta 1080
ctgacactgg acatgtccag acagctataa acagtgcttg tggacatgag gaccagagt 1140
tggactgcat cccgagagga gacggtaaag gatgaaacac aactgcactg ggaccctccg 1200
ccgtaccctc caggcctgcc tcctccacca ctgagccctc caggcctgcc tcctcttcta 1260
cagtgcttgc cttcagccac ccggagaaga gagctatggt ttaggacagc tcaacttatc 1320
accagatctg gagccctgga atccatggga ggggggaaca agtccagact gcttaagaaa 1380

```

<210> 3  
 <211> 306  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 3

Met Ala Ser Ser Gly Ser Val Gln Gln Leu Pro Leu Val Leu Leu Met  
 1 5 10 15

Leu Leu Leu Ala Ser Ala Ala Arg Ala Arg Leu Tyr Phe Arg Ser Gly  
 20 25 30

Gln Thr Cys Tyr His Pro Ile Arg Gly Asp Gln Leu Ala Leu Leu Gly  
 35 40 45

Arg Arg Thr Tyr Pro Arg Pro His Glu Tyr Leu Ser Pro Ala Asp Leu  
 50 55 60

Pro Lys Asn Trp Asp Trp Arg Asn Val Asn Gly Val Asn Tyr Ala Ser  
 65 70 75 80

## 78063.txt

Val Thr Arg Asn Gln His Ile Pro Gln Tyr Cys Gly Ser Cys Trp Ala  
85 90 95

His Gly Ser Thr Ser Ala Met Ala Asp Arg Ile Asn Ile Lys Arg Lys  
100 105 110

Gly Ala Trp Pro Ser Ile Leu Leu Ser Val Gln Asn Val Ile Asp Cys  
115 120 125

Gly Asn Ala Gly Ser Cys Glu Gly Gly Asn Asp Leu Pro Val Trp Glu  
130 135 140

Tyr Ala His Lys His Gly Ile Pro Asp Glu Thr Cys Asn Asn Tyr Gln  
145 150 155 160

Ala Lys Asp Gln Asp Cys Asp Lys Phe Asn Gln Cys Gly Thr Cys Thr  
165 170 175

Glu Phe Lys Glu Cys His Thr Ile Gln Asn Tyr Thr Leu Trp Arg Val  
180 185 190

Gly Asp Tyr Gly Ser Leu Ser Gly Arg Glu Lys Met Met Ala Glu Ile  
195 200 205

Tyr Ala Asn Gly Pro Ile Ser Cys Gly Ile Met Ala Thr Glu Met Met  
210 215 220

Ser Asn Tyr Thr Gly Gly Ile Tyr Ala Glu His Gln Asp Gln Ala Val  
225 230 235 240

Ile Asn His Ile Ile Ser Val Ala Gly Trp Gly Val Ser Asn Asp Gly  
245 250 255

Ile Glu Tyr Trp Ile Val Arg Asn Ser Trp Gly Glu Pro Trp Gly Glu  
260 265 270

Lys Gly Trp Met Arg Ile Val Thr Ser Thr Tyr Lys Gly Gly Thr Gly  
275 280 285

Asp Ser Tyr Asn Leu Ala Ile Glu Ser Ala Cys Thr Phe Gly Asp Pro  
290 295 300

Ile Val  
305

<210> 4

## 78063.txt

<211> 1480  
 <212> DNA  
 <213> Homo sapiens

<400> 4  
 ctgggcccag gccgaggccg gggcgggata cagagcggga gccggcgcgg gatctgggac 60  
 tcggagcggg atccggagcg ggacccagga gccggcgcgg ggccatggcg aggcgcgggc 120  
 caggggtggcg gccgcttctg ctgctcgtgc tgctggcggg cgcggcgcag ggcggcctct 180  
 acttccgccc gggacagacc tgctaccggc ctctgcgggg ggacgggctg gctccgctgg 240  
 ggcgcagcac atacccccgg cctcatgagt acctgtcccc agcggatctg cccaagagct 300  
 gggactggcg caatgtggat ggtgtcaact atgccagcat cacccggaac cagcacatcc 360  
 cccaatactg cggctcctgc tgggcccacg ccagcaccag cgctatggcg gatcggatca 420  
 acatcaagag gaagggagcg tggccctcca ccctcctgtc cgtgcagaac gtcatcgact 480  
 gcggtaacgc tggctcctgt gaagggggta atgacctgtc cgtgtgggac tacgcccacc 540  
 agcacggcat ccctgacgag acctgcaaca actaccaggc caaggaccag gagtgtgaca 600  
 agtttaacca atgtgggaca tgcaatgaat tcaaagagtg ccacgccatc cggaactaca 660  
 ccctctggag ggtgggagac tacggctccc tctctgggag ggagaagatg atggcagaaa 720  
 tctatgcaaa tgggtcccatc agctgtggaa taatggcaac agaaagactg gctaactaca 780  
 ccggaggcat ctatgccgaa taccaggaca ccacatatat aaaccatgtc gtttctgtgg 840  
 ctgggtgggg catcagtgat gggactgagt actggattgt ccggaattca tggggtgaac 900  
 catggggcga gagaggctgg ctgaggatcg tgaccagcac ctataaggat ggggaaggcg 960  
 ccagatacaa ccttgccatc gaggagcact gtacatttgg ggaccccatc gtttaaggcc 1020  
 atgtcactag aagcgcagtt taagaaaagg catggtgacc catgaccaga ggggaccta 1080  
 tggttatgtg tgccaggctg gctggcagga actgggggtg ctatcaatat tggatggcga 1140  
 ggacagcgtg gcactggctg cgagtgttcc tgagagttga aagtgggatg acttatgaca 1200  
 cttgcacagc atggctctgc ctcaaatga tgcagtcagc cacctggatg agaagtgacc 1260  
 tgcgacacag gaaacgatgg gacctcagtc ttcttcagca gaggacttga tattttgtat 1320  
 ttggcaactg tgggcaataa tatggcattt aagaggtgaa agagttcaga cttatcacca 1380  
 ttcttatgtc actttagaat caaggggtggg ggagggaggg agggagttgg cagtttcaaa 1440  
 tcgccaagt gatgaataaa gtatctggct ctgcacgaga 1480

<210> 5  
 <211> 303  
 <212> PRT  
 <213> Homo sapiens

<400> 5

Met Ala Arg Arg Gly Pro Gly Trp Arg Pro Leu Leu Leu Leu Val Leu  
 1 5 10 15  
 Leu Ala Gly Ala Ala Gln Gly Gly Leu Tyr Phe Arg Arg Gly Gln Thr  
 20 25 30  
 Cys Tyr Arg Pro Leu Arg Gly Asp Gly Leu Ala Pro Leu Gly Arg Ser  
 35 40 45  
 Thr Tyr Pro Arg Pro His Glu Tyr Leu Ser Pro Ala Asp Leu Pro Lys  
 50 55 60  
 Ser Trp Asp Trp Arg Asn Val Asp Gly Val Asn Tyr Ala Ser Ile Thr  
 65 70 75 80  
 Arg Asn Gln His Ile Pro Gln Tyr Cys Gly Ser Cys Trp Ala His Ala  
 85 90 95  
 Ser Thr Ser Ala Met Ala Asp Arg Ile Asn Ile Lys Arg Lys Gly Ala  
 100 105 110  
 Trp Pro Ser Thr Leu Leu Ser Val Gln Asn Val Ile Asp Cys Gly Asn  
 115 120 125  
 Ala Gly Ser Cys Glu Gly Gly Asn Asp Leu Ser Val Trp Asp Tyr Ala  
 130 135 140  
 His Gln His Gly Ile Pro Asp Glu Thr Cys Asn Asn Tyr Gln Ala Lys  
 145 150 155 160  
 Asp Gln Glu Cys Asp Lys Phe Asn Gln Cys Gly Thr Cys Asn Glu Phe  
 165 170 175  
 Lys Glu Cys His Ala Ile Arg Asn Tyr Thr Leu Trp Arg Val Gly Asp  
 180 185 190  
 Tyr Gly Ser Leu Ser Gly Arg Glu Lys Met Met Ala Glu Ile Tyr Ala  
 195 200 205  
 Asn Gly Pro Ile Ser Cys Gly Ile Met Ala Thr Glu Arg Leu Ala Asn  
 210 215 220  
 Tyr Thr Gly Gly Ile Tyr Ala Glu Tyr Gln Asp Thr Thr Tyr Ile Asn  
 225 230 235 240  
 His Val Val Ser Val Ala Gly Trp Gly Ile Ser Asp Gly Thr Glu Tyr  
 245 250 255

## 78063.txt

Trp Ile Val Arg Asn Ser Trp Gly Glu Pro Trp Gly Glu Arg Gly Trp  
                   260                                  265                                  270

Leu Arg Ile Val Thr Ser Thr Tyr Lys Asp Gly Lys Gly Ala Arg Tyr  
                   275                                  280                                  285

Asn Leu Ala Ile Glu Glu His Cys Thr Phe Gly Asp Pro Ile Val  
           290                                  295                                  300

<210> 6  
 <211> 646  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 6  
 tcctttccta gtctgtcttc agatgaaacc tattctctgc ttgtacaaga accagtagcc 60  
 gtcctcaagg ccaacagcgt tggggagcgt tacgaggttt agagacgttt agccagttag 120  
 ttaccaaga ctctttcggg actttcacca tcaatgaatc cagtatagct gattctccaa 180  
 gattccctca tagaggaatt ttaattgata catctagaca cttcctgcct gtgaagacaa 240  
 ttttaaaaac tctggatgcc atggctttta ataagtttaa tgttcttcac tggcacatag 300  
 tggacgacca gtctttccct tatcagagta ccacttttcc tgagctaagc aataagggaa 360  
 gctactcttt gtctcatgtc tatacaccaa acgatgtccg gatggtgctg gagtacgccc 420  
 ggctccgagg gattcgagtc ataccagaat ttgatacccc tggccataca cagtcttggg 480  
 gcaaaggaca gaaaaacctt ctaactccat gttacaatca aaaaactaaa actcaagtgt 540  
 ttgggcctgt agaccaact gtaaacacaa cgtatgcatt ctttaacaca tttttcaaag 600  
 aaatcagcag tgtgtttcca gatcagttca tccacttggg aggaga 646

<210> 7  
 <211> 1805  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 7  
 ggatgctttc ttcccagcga cccagactgg aaggttggtc caaagactgc ctagccagac 60  
 tcgcggagca gtcatgccgc agtccccgcg tagcgcccc gggctgctgc tgctgcaggc 120  
 gctgggtgtcg ctagtgtcgc tggccctagt ggccccggcc cgactgcaac ctgcgctatg 180  
 gcccttcccg cgctcgggtgc agatgttccc gcggctgttg tacatctccg cggaggactt 240  
 cagcatcgac cacagtccca attccacagc gggcccttcc tgctcgctgc tacaggaggc 300  
 gtttcggcga tattacaact atgttttttg tttctacaag agacatcatg gccctgctag 360  
 atttcgagct gagccacagt tgcagaagct cctgggtctcc attaccctcg agtcagagt 420  
 cgagtccttc cctagtctgt cttcagatga aacctattct ctgcttgtac aagaaccagt 480

78063.txt

```

agccgtcctc aaggccaaca gcgtttgggg agcgttacga ggtttagaga cgtttagcca 540
gtaggtttac caagactctt tcgggacttt caccatcaat gaatccagta tagctgattc 600
tccaagattc cctcatagag gaattttaat tgatacatct agacacttcc tgcctgtgaa 660
gacaatttta aaaactctgg atgccatggc ttttaataag tttaatgttc ttcactggca 720
catagtggac gaccagtctt tcccttatca gagtaccact tttcctgagc taagcaataa 780
gggaagctac tctttgtctc atgtctatac accaaacgat gtccggatgg tgctggagta 840
cgcccggctc cgagggattc gagtcatacc agaatttgat acccctggcc atacacagtc 900
ttggggcaaa ggacagaaaa accttctaac tccatgttac aatcaaaaaa ctaaaactca 960
agtgtttggg cctgtagacc caactgtaaa cacaacgtat gcattcttta acacattttt 1020
caaagaaatc agcagtgtgt ttccagatca gttcatccac ttgggaggag atgaagtaga 1080
atttcaatgt tgggcatcaa atccaaacat ccaaggtttc atgaagagaa agggctttgg 1140
cagcgatttt agaagactag aatcctttta tattaaaaag attttggaag ttatttcatc 1200
cttaaagaag aactccattg tttggcaaga agtttttgat gataagggtg agcttcagcc 1260
gggcacagta gtcgaagtgt ggaagagtga gcattattca tatgagctaa agcaagtcac 1320
aggctctggc ttccctgcca tcctttctgc tccttggtac ttagacctga tcagctatgg 1380
gcaagactgg aaaaactact acaaagttga gccccttaat tttgaaggct ctgagaagca 1440
gaaacaactt gttattggtg gagaagcttg cctgtgggga gaatttggtg atgcaactaa 1500
ccttactcca agattatggc ctcgagcaag cgctgttggt gagagactct ggagccctaa 1560
aactgtcact gacctagaaa atgcctacaa acgactggcc gtgcaccgct gcagaatggt 1620
cagccgtgga atagctgcac aacctctcta tactggatac tgtaactatg agaataaaat 1680
atagaagtga cagacgtcta cagcattcca gctatgatca tgttgattct gaaatcatgt 1740
aaattaagat ttgttaggct gttttttttt taaataaacc atctttttat tgattgaatc 1800
tttct 1805

```

```

<210> 8
<211> 536
<212> PRT
<213> Murinae gen. sp.

```

<400> 8

```

Met Pro Gln Ser Pro Arg Ser Ala Pro Gly Leu Leu Leu Leu Gln Ala
1           5           10          15

```

```

Leu Val Ser Leu Val Ser Leu Ala Leu Val Ala Pro Ala Arg Leu Gln
          20          25          30

```



Pro Ala Leu Trp Pro Phe Pro Arg Ser Val Gln Met Phe Pro Arg Leu  
 35 40 45  
 Leu Tyr Ile Ser Ala Glu Asp Phe Ser Ile Asp His Ser Pro Asn Ser  
 50 55 60  
 Thr Ala Gly Pro Ser Cys Ser Leu Leu Gln Glu Ala Phe Arg Arg Tyr  
 65 70 75 80  
 Tyr Asn Tyr Val Phe Gly Phe Tyr Lys Arg His His Gly Pro Ala Arg  
 85 90 95  
 Phe Arg Ala Glu Pro Gln Leu Gln Lys Leu Leu Val Ser Ile Thr Leu  
 100 105 110  
 Glu Ser Glu Cys Glu Ser Phe Pro Ser Leu Ser Ser Asp Glu Thr Tyr  
 115 120 125  
 Ser Leu Leu Val Gln Glu Pro Val Ala Val Leu Lys Ala Asn Ser Val  
 130 135 140  
 Trp Gly Ala Leu Arg Gly Leu Glu Thr Phe Ser Gln Leu Val Tyr Gln  
 145 150 155 160  
 Asp Ser Phe Gly Thr Phe Thr Ile Asn Glu Ser Ser Ile Ala Asp Ser  
 165 170 175  
 Pro Arg Phe Pro His Arg Gly Ile Leu Ile Asp Thr Ser Arg His Phe  
 180 185 190  
 Leu Pro Val Lys Thr Ile Leu Lys Thr Leu Asp Ala Met Ala Phe Asn  
 195 200 205  
 Lys Phe Asn Val Leu His Trp His Ile Val Asp Asp Gln Ser Phe Pro  
 210 215 220  
 Tyr Gln Ser Thr Thr Phe Pro Glu Leu Ser Asn Lys Gly Ser Tyr Ser  
 225 230 235 240  
 Leu Ser His Val Tyr Thr Pro Asn Asp Val Arg Met Val Leu Glu Tyr  
 245 250 255  
 Ala Arg Leu Arg Gly Ile Arg Val Ile Pro Glu Phe Asp Thr Pro Gly  
 260 265 270  
 His Thr Gln Ser Trp Gly Lys Gly Gln Lys Asn Leu Leu Thr Pro Cys  
 275 280 285



## 78063.txt

Tyr Asn Gln Lys Thr Lys Thr Gln Val Phe Gly Pro Val Asp Pro Thr  
 290 295 300  
 Val Asn Thr Thr Tyr Ala Phe Phe Asn Thr Phe Phe Lys Glu Ile Ser  
 305 310 315 320  
 Ser Val Phe Pro Asp Gln Phe Ile His Leu Gly Gly Asp Glu Val Glu  
 325 330 335  
 Phe Gln Cys Trp Ala Ser Asn Pro Asn Ile Gln Gly Phe Met Lys Arg  
 340 345 350  
 Lys Gly Phe Gly Ser Asp Phe Arg Arg Leu Glu Ser Phe Tyr Ile Lys  
 355 360 365  
 Lys Ile Leu Glu Ile Ile Ser Ser Leu Lys Lys Asn Ser Ile Val Trp  
 370 375 380  
 Gln Glu Val Phe Asp Asp Lys Val Glu Leu Gln Pro Gly Thr Val Val  
 385 390 395 400  
 Glu Val Trp Lys Ser Glu His Tyr Ser Tyr Glu Leu Lys Gln Val Thr  
 405 410 415  
 Gly Ser Gly Phe Pro Ala Ile Leu Ser Ala Pro Trp Tyr Leu Asp Leu  
 420 425 430  
 Ile Ser Tyr Gly Gln Asp Trp Lys Asn Tyr Tyr Lys Val Glu Pro Leu  
 435 440 445  
 Asn Phe Glu Gly Ser Glu Lys Gln Lys Gln Leu Val Ile Gly Gly Glu  
 450 455 460  
 Ala Cys Leu Trp Gly Glu Phe Val Asp Ala Thr Asn Leu Thr Pro Arg  
 465 470 475 480  
 Leu Trp Pro Arg Ala Ser Ala Val Gly Glu Arg Leu Trp Ser Pro Lys  
 485 490 495  
 Thr Val Thr Asp Leu Glu Asn Ala Tyr Lys Arg Leu Ala Val His Arg  
 500 505 510  
 Cys Arg Met Val Ser Arg Gly Ile Ala Ala Gln Pro Leu Tyr Thr Gly  
 515 520 525  
 Tyr Cys Asn Tyr Glu Asn Lys Ile  
 530 535

<210> 9  
 <211> 1746  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
 ctgatccggg ccgggcgagg agtcgggtcc cgaggctccg gctcggcaga ccgggcgagg 60  
 agcagccgag cggccatgga gctgtgcggg ctggggctgc cccggccgcc catgctgctg 120  
 gcgctgctgt tggcgacact gctggcggcg atgttggcgc tgctgactca ggtggcgctg 180  
 gtggtgcagg tggcggaggc ggctcgggcc ccgagcgtct cggccaagcc ggggcccggc 240  
 ctgtggcccc tgccgctctt ggtgaagatg accccgaacc tgctgcatct cgccccggag 300  
 aacttctaca tcagccacag cccaattcc acggcgggcc cctcctgcac cctgctggag 360  
 gaagcgtttc gacgatata tggctatat tttggtttct acaagtggca tcatgaacct 420  
 gctgaattcc aggctaaaac ccaggttcag caacttcttg tctcaatcac ctttcagtca 480  
 gagtgtgatg ctttcccaa catatcttca gatgagtctt atactttact tgtgaaagaa 540  
 ccagtggctg tccttaaggc caacagagtt tggggagcat tacgaggttt agagaccttt 600  
 agccagttag tttatcaaga ttcttatgga actttcacca tcaatgaatc caccattatt 660  
 gattctccaa ggttttctca cagaggaatt ttgattgata catccagaca ttatctgcca 720  
 gttaagatta ttcttaaaac tctggatgcc atggctttta ataagttaa tgttcttcac 780  
 tggcacatag ttgatgacca gtctttcca tatcagagca tcaactttcc tgagttaagc 840  
 aataaaggaa gctattcttt gtctcatgtt tatacaccaa atgatgtccg tatggtgatt 900  
 gaatatgcca gattacgagg aattcgagtc ctgccagaat ttgatacccc tgggcataca 960  
 ctatcttggg gaaaagggtca gaaagacctc ctgactccat gttacagtag acaaaacaag 1020  
 ttggactctt ttggacctat aaaccctact ctgaatacaa catacagctt ctttactaca 1080  
 tttttcaaag aaattagtga ggtgtttcca gatcaattca ttcatttggg aggagatgaa 1140  
 gtggaattta aatgttggga atcaaattca aaaattcaag atttcatgag gcaaaaaggc 1200  
 tttggcacag attttaagaa actagaatct ttctacattc aaaagggttt ggatattatt 1260  
 gcaaccataa acaagggatc cattgtctgg caggagggtt ttgatgataa agcaaagctt 1320  
 gcgccgggca caatagttga agtatggaaa gacagcgcac atcctgagga actcagtaga 1380  
 gtcacagcat ctggcttccc tgtaatcctt tctgctcctt ggtacttaga tttgattagc 1440  
 tatggacaag attggaggaa atactataaa gtggaacctc ttgatttttg cggtactcag 1500  
 aaacagaaac aacttttcat tgggtggagaa gcttgtctat ggggagaata tgtggatgca 1560  
 actaacctca ctccaagatt atggcctcgg gcaagtgcct ttggtgagag actctggagt 1620  
 tccaagatg tcagagatat ggatgacgcc tatgacagac tgacaaggca ccgctgcagg 1680

atggtcgaac gtggaatagc tgcacaacct ctttatgctg gatattgtaa ccatgagaac 1740  
 atgtaa 1746

<210> 10  
 <211> 556  
 <212> PRT  
 <213> Homo sapiens

<400> 10

Met Glu Leu Cys Gly Leu Gly Leu Pro Arg Pro Pro Met Leu Leu Ala  
 1 5 10 15

Leu Leu Leu Ala Thr Leu Leu Ala Ala Met Leu Ala Leu Leu Thr Gln  
 20 25 30

Val Ala Leu Val Val Gln Val Ala Glu Ala Ala Arg Ala Pro Ser Val  
 35 40 45

Ser Ala Lys Pro Gly Pro Ala Leu Trp Pro Leu Pro Leu Leu Val Lys  
 50 55 60

Met Thr Pro Asn Leu Leu His Leu Ala Pro Glu Asn Phe Tyr Ile Ser  
 65 70 75 80

His Ser Pro Asn Ser Thr Ala Gly Pro Ser Cys Thr Leu Leu Glu Glu  
 85 90 95

Ala Phe Arg Arg Tyr His Gly Tyr Ile Phe Gly Phe Tyr Lys Trp His  
 100 105 110

His Glu Pro Ala Glu Phe Gln Ala Lys Thr Gln Val Gln Gln Leu Leu  
 115 120 125

Val Ser Ile Thr Leu Gln Ser Glu Cys Asp Ala Phe Pro Asn Ile Ser  
 130 135 140

Ser Asp Glu Ser Tyr Thr Leu Leu Val Lys Glu Pro Val Ala Val Leu  
 145 150 155 160

Lys Ala Asn Arg Val Trp Gly Ala Leu Arg Gly Leu Glu Thr Phe Ser  
 165 170 175

Gln Leu Val Tyr Gln Asp Ser Tyr Gly Thr Phe Thr Ile Asn Glu Ser  
 180 185 190

Thr Ile Ile Asp Ser Pro Arg Phe Ser His Arg Gly Ile Leu Ile Asp  
 195 200 205

## 78063.txt

Thr Ser Arg His Tyr Leu Pro Val Lys Ile Ile Leu Lys Thr Leu Asp  
 210 215 220  
 Ala Met Ala Phe Asn Lys Phe Asn Val Leu His Trp His Ile Val Asp  
 225 230 235 240  
 Asp Gln Ser Phe Pro Tyr Gln Ser Ile Thr Phe Pro Glu Leu Ser Asn  
 245 250 255  
 Lys Gly Ser Tyr Ser Leu Ser His Val Tyr Thr Pro Asn Asp Val Arg  
 260 265 270  
 Met Val Ile Glu Tyr Ala Arg Leu Arg Gly Ile Arg Val Leu Pro Glu  
 275 280 285  
 Phe Asp Thr Pro Gly His Thr Leu Ser Trp Gly Lys Gly Gln Lys Asp  
 290 295 300  
 Leu Leu Thr Pro Cys Tyr Ser Arg Gln Asn Lys Leu Asp Ser Phe Gly  
 305 310 315 320  
 Pro Ile Asn Pro Thr Leu Asn Thr Thr Tyr Ser Phe Leu Thr Thr Phe  
 325 330 335  
 Phe Lys Glu Ile Ser Glu Val Phe Pro Asp Gln Phe Ile His Leu Gly  
 340 345 350  
 Gly Asp Glu Val Glu Phe Lys Cys Trp Glu Ser Asn Pro Lys Ile Gln  
 355 360 365  
 Asp Phe Met Arg Gln Lys Gly Phe Gly Thr Asp Phe Lys Lys Leu Glu  
 370 375 380  
 Ser Phe Tyr Ile Gln Lys Val Leu Asp Ile Ile Ala Thr Ile Asn Lys  
 385 390 395 400  
 Gly Ser Ile Val Trp Gln Glu Val Phe Asp Asp Lys Ala Lys Leu Ala  
 405 410 415  
 Pro Gly Thr Ile Val Glu Val Trp Lys Asp Ser Ala Tyr Pro Glu Glu  
 420 425 430  
 Leu Ser Arg Val Thr Ala Ser Gly Phe Pro Val Ile Leu Ser Ala Pro  
 435 440 445  
 Trp Tyr Leu Asp Leu Ile Ser Tyr Gly Gln Asp Trp Arg Lys Tyr Tyr  
 Page 12

450

455

Lys Val Glu Pro Leu Asp Phe Gly Gly Thr Gln Lys Gln Lys Gln Leu  
465 470 475 480

Phe Ile Gly Gly Glu Ala Cys Leu Trp Gly Glu Tyr Val Asp Ala Thr  
485 490 495

Asn Leu Thr Pro Arg Leu Trp Pro Arg Ala Ser Ala Val Gly Glu Arg  
500 505 510

Leu Trp Ser Ser Lys Asp Val Arg Asp Met Asp Asp Ala Tyr Asp Arg  
515 520 525

Leu Thr Arg His Arg Cys Arg Met Val Glu Arg Gly Ile Ala Ala Gln  
530 535 540

Pro Leu Tyr Ala Gly Tyr Cys Asn His Glu Asn Met  
545 550 555

<210> 11  
<211> 676  
<212> DNA  
<213> Murinae gen. sp.

<220>  
<221> misc\_feature  
<222> (604)..(604)  
<223> n is a, c, g, or t

<400> 11  
ggagctggtg ggccggagcg gcggcgccgc catgtccgac agcgagaagc tcaacctgga 60  
ctccatcatc gggcgccctgc tggaagtgc gggctcacgg cctgggaaga acgtgcagct 120  
gacagagaac gagatccgtg gtctgtgcct caaatcccgg gagattttcc tgagccagcc 180  
cattcttctg gagcttgagg cgcccctcaa gatctgtggt gacatccatg gccagtacta 240  
tgaccttcta cggctgtttg agtatggtgg cttccctcca gagagcaact acctcttctt 300  
gggggattat gtagatcggg gcaagcagtc tttggagacc atctgcctgt tgctggccta 360  
taagatcaga taccgggaga atttctttct acttcgtggg aaccatgagt gtgccagcat 420  
caaccgcatt tatggcttct atgatgaatg caagagaaga tacaacatca aactgtggaa 480  
gacgttcact gactgcttca actgcctgcc cattgcagcc attgtggatg agaagatctt 540  
ctgctgccac gggggcctgt ctccagactt gcaatccatg gagcagatta ggcgtattat 600  
gcgngccaca gacgtgcctg accagggcct actgtgtgat ctctgtggt ctgaccctga 660  
caagaaatag cctcca 676

78063.txt

<210> 12  
 <211> 1369  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 12  
 ggaggcagga gagggcccgg agctggtggg ccggagcggc ggcgccgcca tgtccgacag 60  
 cgagaagctc aacctggact ccatcatcgg gcgcctgctg gaagtgcagg gctcacggcc 120  
 tgggaagaac gtgcagctga cagagaacga gatccgtggt ctgtgcctca aatcccggga 180  
 gattttcctg agccagccca ttcttctgga gcttgaggcg cccctcaaga tctgtggtga 240  
 catccatggc cagtactatg accttctacg gctgtttgag tatggtggct tccctccaga 300  
 gagcaactac ctcttcttgg gggattatgt agatcggggc aagcagtctt tggagaccat 360  
 ctgcctgttg ctggcctata agatcagata cccggagaat ttctttctac ttcgtgggaa 420  
 ccatgagtgt gccagcatca accgcattta tggcttctat gatgaatgca agagaagata 480  
 caacatcaaa ctgtggaaga cgttcactga ctgcttcaac tgcctgccca ttgcagccat 540  
 tgtggatgag aagatcttct gctgccacgg gggcctgtct ccagacttgc aatccatgga 600  
 gcagattagg cgtattatgc ggcccacaga cgtgcctgac cagggcctac tgtgtgatct 660  
 cctgtggtct gaccctgaca aggatgttca aggctggggc gagaatgacc gtggtgtctc 720  
 ctttaccttt ggggctgagg tggtagccaa gttcctgcac aagcatgatt tggacctcat 780  
 ctgcagagca catcagggtg tagaagatgg ctatgagttc tttgccaaga gacagttggt 840  
 gacactcttc tcagctccca actactgtgg agagtttgac aatgctggtg ccatgatgag 900  
 tgtggatgag accctcatgt gttccttcca gatcctcaag cccgctgata agaataaggg 960  
 caagtatggg cagttcagcg gcctgaaccc cggaggccgg cccatcactc caccgccaa 1020  
 ttctgccaaa gccaagaaat agcctccatg tgctgccctt ctgccccaga tcgtttgtac 1080  
 agaaatcatg ctgccatggg tcacactggc ctctcaggcc caccggtcac ggggaacaca 1140  
 cagcgttaag tgtctttcct ttatttttta aagaatcaat agcagcatct aatctcccag 1200  
 ggctccctcc caccagcacc tgtggtggct gcaagtggaa tcctggggcc aaggctgcag 1260  
 ctcagggcaa tggcagacca gattgtgggt ctccagcctt gcatggctgg cagccagatc 1320  
 ctggggcaac ccatctgggtc tcttgaataa aggtcaaagc tggattctc 1369

<210> 13  
 <211> 330  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 13

Met Ser Asp Ser Glu Lys Leu Asn Leu Asp Ser Ile Ile Gly Arg Leu  
 1 5 10 15

## 78063.txt

Leu Glu Val Gln Gly Ser Arg Pro Gly Lys Asn Val Gln Leu Thr Glu  
 20 25 30  
 Asn Glu Ile Arg Gly Leu Cys Leu Lys Ser Arg Glu Ile Phe Leu Ser  
 35 40 45  
 Gln Pro Ile Leu Leu Glu Leu Glu Ala Pro Leu Lys Ile Cys Gly Asp  
 50 55 60  
 Ile His Gly Gln Tyr Tyr Asp Leu Leu Arg Leu Phe Glu Tyr Gly Gly  
 65 70 75 80  
 Phe Pro Pro Glu Ser Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg  
 85 90 95  
 Gly Lys Gln Ser Leu Glu Thr Ile Cys Leu Leu Leu Ala Tyr Lys Ile  
 100 105 110  
 Arg Tyr Pro Glu Asn Phe Phe Leu Leu Arg Gly Asn His Glu Cys Ala  
 115 120 125  
 Ser Ile Asn Arg Ile Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Tyr  
 130 135 140  
 Asn Ile Lys Leu Trp Lys Thr Phe Thr Asp Cys Phe Asn Cys Leu Pro  
 145 150 155 160  
 Ile Ala Ala Ile Val Asp Glu Lys Ile Phe Cys Cys His Gly Gly Leu  
 165 170 175  
 Ser Pro Asp Leu Gln Ser Met Glu Gln Ile Arg Arg Ile Met Arg Pro  
 180 185 190  
 Thr Asp Val Pro Asp Gln Gly Leu Leu Cys Asp Leu Leu Trp Ser Asp  
 195 200 205  
 Pro Asp Lys Asp Val Gln Gly Trp Gly Glu Asn Asp Arg Gly Val Ser  
 210 215 220  
 Phe Thr Phe Gly Ala Glu Val Val Ala Lys Phe Leu His Lys His Asp  
 225 230 235 240  
 Leu Asp Leu Ile Cys Arg Ala His Gln Val Val Glu Asp Gly Tyr Glu  
 245 250 255  
 Phe Phe Ala Lys Arg Gln Leu Val Thr Leu Phe Ser Ala Pro Asn Tyr  
 Page 15



260

265

270

Cys Gly Glu Phe Asp Asn Ala Gly Ala Met Met Ser Val Asp Glu Thr  
           275                                  280                                  285

Leu Met Cys Ser Phe Gln Ile Leu Lys Pro Ala Asp Lys Asn Lys Gly  
       290                                  295                                  300

Lys Tyr Gly Gln Phe Ser Gly Leu Asn Pro Gly Gly Arg Pro Ile Thr  
   305                                  310                                  315                                  320

Pro Pro Arg Asn Ser Ala Lys Ala Lys Lys  
                                   325                                  330

<210> 14  
 <211> 993  
 <212> DNA  
 <213> Homo sapiens

<400> 14  
 atgtccgaca gcgagaagct caacctggac tcgatcatcg ggcgcctgct ggaagtgcag 60  
 ggctcgcggc ctggcaagaa tgtacagctg acagagaacg agatccgcgg tctgtgcctg 120  
 aaatcccggg agatttttct gagccagccc attcttcttg agctggaggc acccctcaag 180  
 atctgcggtg acatacacgg ccagtactac gaccttctgc gactatttga gtatggcggt 240  
 ttccctcccg agagcaacta cctctttctg ggggactatg tggacagggg caagcagtcc 300  
 ttggagacca tctgcctgct gctggcctat aagatcaagt accccgagaa cttcttcctg 360  
 ctccgtggga accacgagtg tgccagcatc aaccgcatct atggtttcta cgatgagtg 420  
 aagagacgct acaacatcaa actgtggaaa accttcactg actgcttcaa ctgcctgccc 480  
 atcgcggcca tagtggacga aaagatcttc tgctgccacg gaggcctgtc cccggacctg 540  
 cagtctatgg agcagattcg gcggatcatg cggcccacag atgtgcctga ccagggcctg 600  
 ctgtgtgacc tgctgtggtc tgaccctgac aaggacgtgc agggctgggg cgagaacgac 660  
 cgtggcgtct cttttacctt tggagccgag gtggtggcca agttcctcca caagcacgac 720  
 ttggacctca tctgccgagc acaccagggtg gtagaagacg gctacgagtt ctttgccaag 780  
 cggcagctgg tgacactttt ctcagctccc aactactgtg gcgagtttga caatgctggc 840  
 gccatgatga gtgtggacga gaccctcatg tgctctttcc agatcctcaa gcccgccgac 900  
 aagaacaagg ggaagtacgg gcagttcagt ggcctgaacc ctggaggccg acccatcacc 960  
 ccaccccgcg attccgccaa agccaagaaa tag 993

<210> 15  
 <211> 330  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 15

Met Ser Asp Ser Glu Lys Leu Asn Leu Asp Ser Ile Ile Gly Arg Leu  
 1 5 10 15

Leu Glu Val Gln Gly Ser Arg Pro Gly Lys Asn Val Gln Leu Thr Glu  
 20 25 30

Asn Glu Ile Arg Gly Leu Cys Leu Lys Ser Arg Glu Ile Phe Leu Ser  
 35 40 45

Gln Pro Ile Leu Leu Glu Leu Glu Ala Pro Leu Lys Ile Cys Gly Asp  
 50 55 60

Ile His Gly Gln Tyr Tyr Asp Leu Leu Arg Leu Phe Glu Tyr Gly Gly  
 65 70 75 80

Phe Pro Pro Glu Ser Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg  
 85 90 95

Gly Lys Gln Ser Leu Glu Thr Ile Cys Leu Leu Leu Ala Tyr Lys Ile  
 100 105 110

Lys Tyr Pro Glu Asn Phe Phe Leu Leu Arg Gly Asn His Glu Cys Ala  
 115 120 125

Ser Ile Asn Arg Ile Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Tyr  
 130 135 140

Asn Ile Lys Leu Trp Lys Thr Phe Thr Asp Cys Phe Asn Cys Leu Pro  
 145 150 155 160

Ile Ala Ala Ile Val Asp Glu Lys Ile Phe Cys Cys His Gly Gly Leu  
 165 170 175

Ser Pro Asp Leu Gln Ser Met Glu Gln Ile Arg Arg Ile Met Arg Pro  
 180 185 190

Thr Asp Val Pro Asp Gln Gly Leu Leu Cys Asp Leu Leu Trp Ser Asp  
 195 200 205

Pro Asp Lys Asp Val Gln Gly Trp Gly Glu Asn Asp Arg Gly Val Ser  
 210 215 220

Phe Thr Phe Gly Ala Glu Val Val Ala Lys Phe Leu His Lys His Asp  
 225 230 235 240

78063.txt

Leu Asp Leu Ile Cys Arg Ala His Gln Val Val Glu Asp Gly Tyr Glu  
245 250 255

Phe Phe Ala Lys Arg Gln Leu Val Thr Leu Phe Ser Ala Pro Asn Tyr  
260 265 270

Cys Gly Glu Phe Asp Asn Ala Gly Ala Met Met Ser Val Asp Glu Thr  
275 280 285

Leu Met Cys Ser Phe Gln Ile Leu Lys Pro Ala Asp Lys Asn Lys Gly  
290 295 300

Lys Tyr Gly Gln Phe Ser Gly Leu Asn Pro Gly Gly Arg Pro Ile Thr  
305 310 315 320

Pro Pro Arg Asn Ser Ala Lys Ala Lys Lys  
325 330

<210> 16  
<211> 702  
<212> DNA  
<213> Murinae gen. sp.

<400> 16  
ggcatgacag gcagtgagca ggtgatgagc cagggttgagg atctctttag tgagggaata 60  
ggctgctgga gatatggctg tgggtctacaa ggaggctggg gaactagcaa ggagatgctc 120  
tctcagctat cacagcctta cagcaaagcc actatctctt tggattttga aattttctct 180  
gccatgccta tgactatttt aaaattgggc aaagtatatc catttcagag gggctttttc 240  
tgtactgaca acagcgtgaa gtacccgtac catgacagta ccatcccgtc ccgtatactc 300  
gccatactgg ggcttggctt acccattttc tctatgagta tggagaatct ctgtctgttt 360  
actttaatgt cttgcattcg aattcctttg tcggcaatcc ctacatagcc accatttaca 420  
aagccgtcgg agcctttttg tcggagtctc agctagtcag tccttgactg acatcgctaa 480  
gtatactata ggcagtttgc ggccgcactt cttggctatc tgtaaccag actggtcaaa 540  
aatcaactgc agtgatggct atattgagga ctacatatgt caagggaatg aagagaaagt 600  
caaggagggc aggttgtctt tctactcggg acactcttca ttctctatgt actgcatgct 660  
gtttgtcgca ctttatcttc aagccaggat gaaggagac tg 702

<210> 17  
<211> 1432  
<212> DNA  
<213> Murinae gen. sp.

<400> 17  
catccttaga gctcgccccg cctgttggag agggcacagg gcagcggagg gcgattggcc 60

78063.txt

```

gcgacgagcc agcactgaga gagcaggcgc ctgaggcgac agatcggcgg ccactcgggtg 120
gcagggcggc ccaatccaaa ctgccctggg ccctgctccc gtcagtctaa gaggctcgca 180
gtcgcttggg gcggccgcca tcccgagggc ggggctctgg gaattgggta tctggaccgc 240
cgcggtctgt tcctcccgcc actcgcacca ggtggtgaca ccatccagcc ggtgaccatg 300
ttcgacaaga cgcggtgccc gtacgtggcc ctcgatgtga tttgcgtgtt gctggctgga 360
ttgccttttg caattcttac ttcaaggcat acccccttcc agcgaggaat attctgtaat 420
gatgactcca tcaagtaccc ttacaaggaa gacaccatac cttatgcctt attaggtgga 480
atagtcattc cattctgtat tatcgttatg agtattggag aatctctgtc tgtttacttt 540
aatgtcttgc attcgaattc ctttgtcggc aatccctaca tagccaccat ttacaaagcc 600
gtcggagcct ttttgttcgg agtctcagct agtcagtcct tgactgacat cgctaagtat 660
actataggca gtttgcggcc gcacttcttg gctatctgta acccagactg gtcaaaaatc 720
aactgcagtg atggctatat tgaggactac atatgtcaag ggaatgaaga gaaagtcaag 780
gagggcaggt tgtctttcta ctcgggacac tcttcattct ctatgtactg catgctgttt 840
gtcgcacttt atcttcaagc caggatgaag ggagactggg caagactctt acgacccatg 900
ctccagtttg ggctcattgc tttttccata tatgtgggcc tttctcgagt gtctgactac 960
aaacaccact ggagtgacgt cacagttgga ctcatcagg gagctgctat ggctatactg 1020
gttgctttgt atgtatccga tttcttcaag gacacacatt cttacaaaga gagaaaggaa 1080
gaggatccac acacgactct ccatgaaacc gccagttcac ggaactactg ggcgctggcc 1140
cgcttcaaag gcaacagctg gaggctaaag gcagggggat gcgtattact tcctgctgta 1200
cagaccattc tataaaggac tgctgctatc tatacctcct ggatgcccat tttatgtgtg 1260
tacagttact tctaacacaa tgagtaacag ttcaattaa gaaaatgaag cctgtcacta 1320
aaacactgtc ccacctgtac atttttattg aaagacgcta tgtacaaatg tgtatgttac 1380
atgccttctc agaatgatgt tgacttaaata ataataaaaa gcttgtgaac ca 1432

```

<210> 18  
 <211> 378  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 18

Glu Ser Arg Arg Leu Arg Arg Gln Ile Gly Gly His Ser Val Ala Gly  
 1 5 10 15

Arg Pro Asn Pro Asn Cys Pro Gly Pro Cys Ser Arg Gln Ser Lys Arg  
 20 25 30

Leu Ala Val Ala Trp Gly Gly Arg His Pro Glu Gly Gly Ala Leu Gly  
 35 40 45  
 Ile Gly Tyr Leu Asp Arg Arg Gly Leu Phe Leu Pro Pro Leu Ala Pro  
 50 55 60  
 Gly Gly Asp Thr Ile Gln Pro Val Thr Met Phe Asp Lys Thr Arg Leu  
 65 70 75 80  
 Pro Tyr Val Ala Leu Asp Val Ile Cys Val Leu Leu Ala Gly Leu Pro  
 85 90 95  
 Phe Ala Ile Leu Thr Ser Arg His Thr Pro Phe Gln Arg Gly Ile Phe  
 100 105 110  
 Cys Asn Asp Asp Ser Ile Lys Tyr Pro Tyr Lys Glu Asp Thr Ile Pro  
 115 120 125  
 Tyr Ala Leu Leu Gly Gly Ile Val Ile Pro Phe Cys Ile Ile Val Met  
 130 135 140  
 Ser Ile Gly Glu Ser Leu Ser Val Tyr Phe Asn Val Leu His Ser Asn  
 145 150 155 160  
 Ser Phe Val Gly Asn Pro Tyr Ile Ala Thr Ile Tyr Lys Ala Val Gly  
 165 170 175  
 Ala Phe Leu Phe Gly Val Ser Ala Ser Gln Ser Leu Thr Asp Ile Ala  
 180 185 190  
 Lys Tyr Thr Ile Gly Ser Leu Arg Pro His Phe Leu Ala Ile Cys Asn  
 195 200 205  
 Pro Asp Trp Ser Lys Ile Asn Cys Ser Asp Gly Tyr Ile Glu Asp Tyr  
 210 215 220  
 Ile Cys Gln Gly Asn Glu Glu Lys Val Lys Glu Gly Arg Leu Ser Phe  
 225 230 235 240  
 Tyr Ser Gly His Ser Ser Phe Ser Met Tyr Cys Met Leu Phe Val Ala  
 245 250 255  
 Leu Tyr Leu Gln Ala Arg Met Lys Gly Asp Trp Ala Arg Leu Leu Arg  
 260 265 270  
 Pro Met Leu Gln Phe Gly Leu Ile Ala Phe Ser Ile Tyr Val Gly Leu  
 275 280 285

78063.txt

Ser Arg Val Ser Asp Tyr Lys His His Trp Ser Asp Val Thr Val Gly  
290 295 300

Leu Ile Gln Gly Ala Ala Met Ala Ile Leu Val Ala Leu Tyr Val Ser  
305 310 315 320

Asp Phe Phe Lys Asp Thr His Ser Tyr Lys Glu Arg Lys Glu Glu Asp  
325 330 335

Pro His Thr Thr Leu His Glu Thr Ala Ser Ser Arg Asn Tyr Trp Ala  
340 345 350

Leu Ala Arg Phe Lys Gly Asn Ser Trp Arg Leu Lys Ala Gly Gly Cys  
355 360 365

Val Leu Leu Pro Ala Val Gln Thr Ile Leu  
370 375

<210> 19  
<211> 1626  
<212> DNA  
<213> Homo sapiens

<400> 19  
tcagcgggag gggctggacc ccgcgttcct cctccctgcc ggtcccatc cttaaagcga 60  
gagtctggac gccccgcctg tgggagagag cgccgggac cggacgggga gcaaccgggg 120  
caggccgtgc cggctgagga ggtcctgagg ctacagagct gccgcggctg gcacacgagc 180  
gcctcggcac taaccgagtg ttcgcggggg ctgtgagggg agggccccgg gcgccattgc 240  
tggcggtggg agcgcggccc ggtctcagcc cgccctcggc tgctctcctc ctccggctgg 300  
gaggggcccgt agctcggggc cgctcgccagc cccggccccg gctcgagaat caagggcctc 360  
ggccgcccgtc ccgcagctca gtccatcgcc cttgccgggc agcccgggca gagaccatgt 420  
ttgacaagac gcggctgccg tacgtggccc tcgatgtgct ctgctgtgtg ctggcttcca 480  
tgcctatggc tgttctaaaa ttgggcaaaa tatatccatt tcagagaggc tttttctgta 540  
aagacaacag catcaactat ccgtaccatg acagtaccgt cacatccact gtcctcatcc 600  
tagtgggggt tggcttgccc atttcctcta ttattcttgg agaaaccctg tctgtttact 660  
gtaacctttt gcactcaa attccttatca ggaataacta catagccact atttacaag 720  
ccattggaac ctttttattt ggtgcagctg ctagtcagtc cctgactgac attgccaagt 780  
attcaatagg cagactgcgg cctcacttct tggatgtttg tgatccagat tgggtcaaaaa 840  
tcaactgcag cgatgggttac attgaatact acatatgtcg agggaatgca gaaagagtta 900  
aggaaggcag gttgtccttc tattcaggcc actcttcggt ttccatgtac tgcattgctgt 960

## 78063.txt

```

ttgtggcact ttatcttcaa gccaggatga agggagactg ggcaagactc ttacgccccca 1020
cactgcaatt tggtcttggt gccgtatcca tttatgtggg cctttctcga gtttctgatt 1080
ataaacacca ctggagcgat gtgttgactg gactcattca gggagctctg gttgcaatat 1140
tagttgctgt atatgtatcg gatttcttca aagaaagaac ttctttttaa gaaagaaaag 1200
aggaggactc tcatacaact ctgcatgaaa caccaacaac tgggaatcac tatccgagca 1260
atcaccagcc ttgaaaggca gcagggtgcc cagggtgaagc tggcctgttt tctaaaggaa 1320
aatgattgcc acaaggcaag aggatgcatc tttcttcctg gtgtacaagc ctttaaagac 1380
ttctgctgct gctatgcctc ttggatgcac actttgtgtg tacatagtta cttttaactc 1440
agtggttatc taatagctct aaactcatta aaaaaactcc aagccttcca ccaaaacagt 1500
gccccacctg tatacathtt tattaaaaaa atgtaatgct tatgtataaa catgtatgta 1560
atatgctttc tatgaatgat gtttgattta aatataatac atattaaaat gtatgggaga 1620
accaaa 1626

```

```

<210> 20
<211> 378
<212> PRT
<213> Homo sapiens
<400> 20

```

```

Gly Gly Pro Glu Ala Thr Glu Leu Pro Arg Leu Ala His Glu Arg Leu
1          5          10          15

```

```

Gly Thr Asn Arg Val Phe Ala Gly Ala Val Arg Gly Gly Pro Arg Ala
          20          25          30

```

```

Pro Leu Leu Ala Val Gly Ala Pro Pro Gly Leu Ser Pro Pro Ser Ala
          35          40          45

```

```

Ala Leu Leu Leu Arg Leu Gly Gly Ala Val Ala Arg Gly Arg Arg Gln
50          55          60

```

```

Pro Arg Pro Gly Leu Glu Asn Gln Gly Pro Arg Pro Pro Ser Arg Ser
65          70          75          80

```

```

Ser Val His Arg Pro Cys Arg Ala Ala Arg Ala Glu Thr Met Phe Asp
          85          90          95

```

```

Lys Thr Arg Leu Pro Tyr Val Ala Leu Asp Val Leu Cys Val Leu Leu
          100          105          110

```

```

Ala Ser Met Pro Met Ala Val Leu Lys Leu Gly Gln Ile Tyr Pro Phe
          115          120          125

```



## 78063.txt

Gln Arg Gly Phe Phe Cys Lys Asp Asn Ser Ile Asn Tyr Pro Tyr His  
 130 135 140  
 Asp Ser Thr Val Thr Ser Thr Val Leu Ile Leu Val Gly Val Gly Leu  
 145 150 155 160  
 Pro Ile Ser Ser Ile Ile Leu Gly Glu Thr Leu Ser Val Tyr Cys Asn  
 165 170 175  
 Leu Leu His Ser Asn Ser Phe Ile Arg Asn Asn Tyr Ile Ala Thr Ile  
 180 185 190  
 Tyr Lys Ala Ile Gly Thr Phe Leu Phe Gly Ala Ala Ala Ser Gln Ser  
 195 200 205  
 Leu Thr Asp Ile Ala Lys Tyr Ser Ile Gly Arg Leu Arg Pro His Phe  
 210 215 220  
 Leu Asp Val Cys Asp Pro Asp Trp Ser Lys Ile Asn Cys Ser Asp Gly  
 225 230 235 240  
 Tyr Ile Glu Tyr Tyr Ile Cys Arg Gly Asn Ala Glu Arg Val Lys Glu  
 245 250 255  
 Gly Arg Leu Ser Phe Tyr Ser Gly His Ser Ser Phe Ser Met Tyr Cys  
 260 265 270  
 Met Leu Phe Val Ala Leu Tyr Leu Gln Ala Arg Met Lys Gly Asp Trp  
 275 280 285  
 Ala Arg Leu Leu Arg Pro Thr Leu Gln Phe Gly Leu Val Ala Val Ser  
 290 295 300  
 Ile Tyr Val Gly Leu Ser Arg Val Ser Asp Tyr Lys His His Trp Ser  
 305 310 315 320  
 Asp Val Leu Thr Gly Leu Ile Gln Gly Ala Leu Val Ala Ile Leu Val  
 325 330 335  
 Ala Val Tyr Val Ser Asp Phe Phe Lys Glu Arg Thr Ser Phe Lys Glu  
 340 345 350  
 Arg Lys Glu Glu Asp Ser His Thr Thr Leu His Glu Thr Pro Thr Thr  
 355 360 365  
 Gly Asn His Tyr Pro Ser Asn His Gln Pro  
 370 375

## 78063.txt

<210> 21  
 <211> 816  
 <212> DNA  
 <213> Homo sapiens

<400> 21  
 atttattccc ttttgctagc tggattgcct ttgcaattc ttacttcaag gcataaccccc 60  
 ttccaacgag gagtattctg taatgatgag tccatcaagt acccttacaagaagaacacacc 120  
 ataccttatg cgttattagg tggaataatc attccattca gtattatcgt tattattctt 180  
 ggagaaaccc tgtctgttta ctgtaacctt ttgcactcaa attcctttat caggaataac 240  
 tacatagcca ctatttacaagccattgga acctttttat ttgggtgcagc tgctagtcag 300  
 tccctgactg acattgccaa gtattcaata ggcagactgc ggcctcactt cttggatggt 360  
 tgtgatccag attgggtcaaa aatcaactgc agcgatgggt acattgaata ctacatatgt 420  
 cgaggggaatg cagaaagagt taaggaaggc aggttgctct tctattcagg ccactcttcg 480  
 ttttccatgt actgcatgct gtttgtggca ctttatcttc aagccaggat gaagggagac 540  
 tgggcaagac tcttacgccc cacactgcaa tttgggtcttg ttgccgtatc catttatgtg 600  
 ggcctttctc gagtttctga ttataaacac cactggagcg atgtgttgac tggactcatt 660  
 cagggagctc tggttgcaat attagttgct gtatatgtat cggatttctt caaagaaaga 720  
 acttctttta aagaaagaaa agaggaggac tctcatacaa ctctgcatga aacaccaaca 780  
 actggaatc actatccgag caatcaccag ccttga 816

<210> 22  
 <211> 271  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
 Ile Tyr Ser Leu Leu Leu Ala Gly Leu Pro Phe Ala Ile Leu Thr Ser  
 1 5 10 15  
 Arg His Thr Pro Phe Gln Arg Gly Val Phe Cys Asn Asp Glu Ser Ile  
 20 25 30  
 Lys Tyr Pro Tyr Lys Glu Asp Thr Ile Pro Tyr Ala Leu Leu Gly Gly  
 35 40 45  
 Ile Ile Ile Pro Phe Ser Ile Ile Val Ile Ile Leu Gly Glu Thr Leu  
 50 55 60  
 Ser Val Tyr Cys Asn Leu Leu His Ser Asn Ser Phe Ile Arg Asn Asn  
 65 70 75 80

78063.txt

Tyr Ile Ala Thr Ile Tyr Lys Ala Ile Gly Thr Phe Leu Phe Gly Ala  
85 90 95

Ala Ala Ser Gln Ser Leu Thr Asp Ile Ala Lys Tyr Ser Ile Gly Arg  
100 105 110

Leu Arg Pro His Phe Leu Asp Val Cys Asp Pro Asp Trp Ser Lys Ile  
115 120 125

Asn Cys Ser Asp Gly Tyr Ile Glu Tyr Tyr Ile Cys Arg Gly Asn Ala  
130 135 140

Glu Arg Val Lys Glu Gly Arg Leu Ser Phe Tyr Ser Gly His Ser Ser  
145 150 155 160

Phe Ser Met Tyr Cys Met Leu Phe Val Ala Leu Tyr Leu Gln Ala Arg  
165 170 175

Met Lys Gly Asp Trp Ala Arg Leu Leu Arg Pro Thr Leu Gln Phe Gly  
180 185 190

Leu Val Ala Val Ser Ile Tyr Val Gly Leu Ser Arg Val Ser Asp Tyr  
195 200 205

Lys His His Trp Ser Asp Val Leu Thr Gly Leu Ile Gln Gly Ala Leu  
210 215 220

Val Ala Ile Leu Val Ala Val Tyr Val Ser Asp Phe Phe Lys Glu Arg  
225 230 235 240

Thr Ser Phe Lys Glu Arg Lys Glu Glu Asp Ser His Thr Thr Leu His  
245 250 255

Glu Thr Pro Thr Thr Gly Asn His Tyr Pro Ser Asn His Gln Pro  
260 265 270

<210> 23  
<211> 840  
<212> DNA  
<213> Murinae gen. sp.

<220>  
<221> misc\_feature  
<222> (474)..(474)  
<223> n is a, c, g, or t

<400> 23  
ccgaagtaag ttgcccagtt ttctgtctta tactgagggt cgccgggtca tggtgccagc

60

## 78063.txt

ctgactgaga agaggacgct cccgggaaac gaatgaggaa ccacctcctc ctgctgttca	120
agtacagggg cctggtgcgc aaaggggaaga aaagcaaaag acgaaaatgg ctaaatttaa	180
gatccgtcca gccactgcct ctgactgcag tgacatcctg cgactgatca aggaactggc	240
taaatatgaa tacatggaag atcaagtcatt tttaactgag aaagatctcc aagaggatgg	300
ctttggagaa cacccttctt accactgcct ggttgcagaa gtgcctaaag agcactggac	360
ccctgaagga catagcattg ttgggttcgc catgtactat ttacctatg acccatggat	420
tggcaagttg ctgtatcttg aagacttctt cgtgatgagt gattacagag gctntggtat	480
aggatcagaa attttgaaga atctaagcca ggttgccatg aagtgtcgct gcagcagtat	540
gcacttcttg gtagcagaat ggaatgaacc atctatcaac ttctacaaaa gaagaggtgc	600
ttcggatctg tccagtgaag agggatggga ggctcttcaa gattgacaag agtacttgct	660
aaaaatggca gcagaggagt gaggcgtgcc ggtgtagaac atgacaacct ccattgtgct	720
ttagaataat tctcagcttc ccttgctttc tatcttgtgg ttagggtgaa ataatagagc	780
gagccaccat tccaaagctt tattaccagt gacgtgttgc atgtttgaaa tcggtctggt	840

<210> 24  
 <211> 1052  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 24	
gctgcgagct ttccccgaag taagtttgcc agttttctgt cttataactga ggttcgccgg	60
gtcatggtgc cagcctgact gagaagagga cgctcccggg aaacgaatga ggaaccacct	120
cctcctgctg ttcaagtaca ggggcctggt gcgcaaaggg aagaaaagca aaagacgaaa	180
atggctaaat ttaagatccg tccagccact gcctctgact gcagtacat cctgagactg	240
atcaaggaac tggctaaata tgaatacatg gaagatcaag tcattttaac tgagaaagat	300
ctccaagagg atggcttttg agaacacccc ttctaccact gcctgggtgc agaagtgcct	360
aaagagcact ggaccctga aggacatagc attgttgggt tcgccatgta ctattttacc	420
tatgacccat ggattggcaa gttgctgtat cttgaagact tcttcgtgat gaggattac	480
agaggctttg gtataggatc agaaattttg aagaatctaa gccagggtgc catgaagtgt	540
cgctgcagca gtatgcactt cttggtagca gaatggaatg aaccatctat caacttctac	600
aaaagaagag gtgcttcgga tctgtccagt gaagagggat ggaggctctt caagattgac	660
aaagagtact tgctaaaaat ggcagcagag gaggtaggcg tgccggtgta gacaatgaca	720
acctccattg tgcttttagaa taattctcag cttcccttgc tttctatctt gtgtgtagtg	780
aaataataga gcgagcaccc attccaaagc tttattacca gtgacgttgt tgcattgttg	840
aaattcggtc tgtttaaagt ggcagtcatt tatgtggttt ggaggcagaa ttcttgaaca	900

## 78063.txt

tcttttgatg aagaacaagg tggatgatc ttactatata agaaaaacaa aacttcattc 960  
 ttgtgagtca tttaaagtgtg tacaatgtac acactggtac ttagagtttc tgttttgatt 1020  
 cttttttttt taaataaact actctttgat tt 1052

<210> 25  
 <211> 171  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 25

Met Ala Lys Phe Lys Ile Arg Pro Ala Thr Ala Ser Asp Cys Ser Asp  
 1 5 10 15

Ile Leu Arg Leu Ile Lys Glu Leu Ala Lys Tyr Glu Tyr Met Glu Asp  
 20 25 30

Gln Val Ile Leu Thr Glu Lys Asp Leu Gln Glu Asp Gly Phe Gly Glu  
 35 40 45

His Pro Phe Tyr His Cys Leu Val Ala Glu Val Pro Lys Glu His Trp  
 50 55 60

Thr Pro Glu Gly His Ser Ile Val Gly Phe Ala Met Tyr Tyr Phe Thr  
 65 70 75 80

Tyr Asp Pro Trp Ile Gly Lys Leu Leu Tyr Leu Glu Asp Phe Phe Val  
 85 90 95

Met Ser Asp Tyr Arg Gly Phe Gly Ile Gly Ser Glu Ile Leu Lys Asn  
 100 105 110

Leu Ser Gln Val Ala Met Lys Cys Arg Cys Ser Ser Met His Phe Leu  
 115 120 125

Val Ala Glu Trp Asn Glu Pro Ser Ile Asn Phe Tyr Lys Arg Arg Gly  
 130 135 140

Ala Ser Asp Leu Ser Ser Glu Glu Gly Trp Arg Leu Phe Lys Ile Asp  
 145 150 155 160

Lys Glu Tyr Leu Leu Lys Met Ala Ala Glu Glu  
 165 170

<210> 26  
 <211> 1111  
 <212> DNA  
 <213> Homo sapiens

78063.txt

<400> 26  
gcgagctct tagtcgctgg ccgactgggtg tttatccgtc actcgccgag gttccttggg 60  
tcatgggtgcc agcctgactg agaagaggac gctcccggga gacgaatgag gaaccacctc 120  
ctcctactgt tcaagtacag gggcctgggtc cgcaaaggga agaaaagcaa aagacgaaaa 180  
tggctaaatt cgtgatccgc ccagccactg ccgcccactg cagtgcata ctgcggctga 240  
tcaaggagct ggctaaatat gaatacatgg aagaacaagt aatcttaact gaaaaagatc 300  
tgctagaaga tggtttttga gagcaccctt tttaccactg cctgggttgca gaagtgccga 360  
aagagcactg gactccggaa ggtaaccctt cgccctttcc agaagccaga gagaccaaca 420  
ttgttggttt tgccatgtac tattttacct atgaccctgt gattggcaag ttattgtatc 480  
ttgaggactt cttcgtgatg agtgattata gaggtacgat tgagctttgg cataggatca 540  
gaaattctga agaattctaag ccagggttgca atgaggtgtc gctggcagca tgcacttctt 600  
gggcagaatg gaatgaacca tccatcaact tctataaaag aagaggtgct tctgatctgt 660  
ccagtgaaga gggttggaga ctgttcaaga tcgacaagga gtacttgcta aaaatggcaa 720  
cagaggagtg aggagtgtg ctgtagatga caacctccat tctatttttag aataaattcc 780  
caacttctct tgcttttctat gctgttttga gtgaaataat agaattgagca cccattccaa 840  
agctttatta ccagtggcgt tgttgcatgt ttgaaatgag gtctgtttta agtggcaatc 900  
tcagatgcag tttggagagt cagatctttc tccttgaata tctttcgata aacaacaagg 960  
tgggtgtgatc ttaatatatt tgaaaaaac ttcattctcg tgagtcattt aaatgtgtac 1020  
aatgtacaca ctggtactta gagtttctgt ttgattcttt ttttaataaac tactctttga 1080  
tttaattcta aaaaaaaaaa aaaaaaagac a 1111

<210> 27  
<211> 190  
<212> PRT  
<213> Homo sapiens

<400> 27  
Glu Pro Pro Pro Pro Thr Val Gln Val Gln Gly Pro Gly Pro Gln Arg  
1 5 10 15  
Glu Glu Lys Gln Lys Thr Lys Met Ala Lys Phe Val Ile Arg Pro Ala  
20 25 30  
Thr Ala Ala Asp Cys Ser Asp Ile Leu Arg Leu Ile Lys Glu Leu Ala  
35 40 45  
Lys Tyr Glu Tyr Met Glu Glu Gln Val Ile Leu Thr Glu Lys Asp Leu  
50 55 60

Leu Glu Asp Gly Phe Gly Glu His Pro Phe Tyr His Cys Leu Val Ala  
65 70 75 80

Glu Val Pro Lys Glu His Trp Thr Pro Glu Gly Asn Pro Ser Pro Phe  
85 90 95

Pro Glu Ala Arg Glu Thr Asn Ile Val Gly Phe Ala Met Tyr Tyr Phe  
100 105 110

Thr Tyr Asp Pro Trp Ile Gly Lys Leu Leu Tyr Leu Glu Asp Phe Phe  
115 120 125

Val Met Ser Asp Tyr Arg Gly Thr Ile Glu Leu Trp His Arg Ile Arg  
130 135 140

Asn Ser Glu Glu Ser Lys Pro Gly Cys Asn Glu Val Ser Leu Ala Ala  
145 150 155 160

Cys Thr Ser Trp Ala Glu Trp Asn Glu Pro Ser Ile Asn Phe Tyr Lys  
165 170 175

Arg Arg Gly Ala Ser Asp Leu Ser Ser Glu Glu Gly Trp Arg  
180 185 190

<210> 28  
<211> 745  
<212> DNA  
<213> Murinae gen. sp.

<400> 28  
aatctatgga gcagattcgg cgaattatga gaccaactga tgtaccagat caaggtcttc 60  
tttgtgatct ttggtggtct gaccccgatg aaagatgtct taggctgggg tgaaaatgac 120  
agaggagtgt ccttcacatt tggtgcagaa gtggttgcaa aatttctcca taagcatgat 180  
tcggatctta tatgtagagc ccatcaggtg gttgaagatg gctatgagtt tttcgcaaag 240  
aggcagttag tcactctggt gttctgagag cccaactact gtggcgagtt tgacaatgca 300  
ggcgccatga tgagtgtgga tgagaccctc atgtgttcct tccagatttt aaagcctgca 360  
gagaaaaaga agcccaacgc cacgagacct gtcacaccac cacgggggtat gatcacaag 420  
caagcaaaga aatagatgtc acttgacact gcctgggttg gacttgtaac atagcgttca 480  
taaccttcct ttttaaactg tgatgtgctg gtcagcttgc ccaggtagac ctgtctgtcg 540  
ggccctcctc catttgatta ctgctggcac ttgctgggta tagcagcaag ccaagcactt 600  
cattctcaag agagcatttg gttctgaacc tctgttcctt ttgtggacag ctctgatgat 660  
gggtgtaagc tgtacaccct ggcaggttat cctgtctgag gagaaagtgt acaattgatc 720  
tttttttagt ttagtataag tcatg 745



<210> 29  
 <211> 2127  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 29  
 gctgctgcgg gagggtcggc ggcgggacgg cgatggcgga tatcgacaaa ctcaacatcg 60  
 acagcatcat ccaacggctg ctggaagtga gaggggtccaa gccaggcaag aatgtccagc 120  
 tccaggagaa cgagatccga ggactctgcc tgaagtctcg ggagatcttc ctcaagtcagc 180  
 ctatcctttt agaacttgaa gcaccactca agatatgtgg tgacatccac gggcagtact 240  
 atgatttgct ccgtctgttt gaatacgggtg gctttcctcc agagagcaac tatttggttc 300  
 tcggggacta tgtggacagg ggcaagcagt ccctggagac aatctgcctc ttgctggcct 360  
 acaaaatcaa gtatccggag aacttctttc ttctcagagg gaaccacgag tgcgccagca 420  
 tcaataggat ctacggattt tatgatgagt gtaaaagaag atacaacatt aagctgtgga 480  
 aaacgttcac agactgtttt aactgcttgc cgatagcagc catcgtggac gagaagatat 540  
 tctgctgtca tggaggttta tcaccagatc ttcaatctat ggagcagatt cggcgaatta 600  
 tgagaccaac tgatgtacca gatcaaggtc ttctttgtga tcttttgtgg tctgaccccg 660  
 ataaagatgt cttaggctgg ggtgaaaatg acagaggagt gtccttcaca tttggtgcag 720  
 aagtggttgc aaaattttctc cataagcatg atttggatct tatatgtaga gcccatcagg 780  
 tggttgaaga tggctatgag ttttttgcaa agaggcagtt agtcactctg ttttctgcac 840  
 ccaactactg tggcgagttt gacaatgcag gcgccatgat gagtgtggat gagaccctca 900  
 tgtgttcctt ccagatttta aagcctgcag agaaaaagaa gcccaacgcc acgagacctg 960  
 tcacaccacc acgggggtatg atcaciaaagc aagcaaagaa atagatgtca cttgacactg 1020  
 cctggttggg acttgtaaca tagcgttcat aaccttcctt tttaaactgt gatgtgctgg 1080  
 tcagcttgcc caggtagacc tgtctgtcgg gccctcctcc atttgattac tgctggcact 1140  
 tgctggttat agcagcaagc caagcacttc attctcaaga gagcattttg ttttgaacct 1200  
 ctgttccctt tgtggacagc tctgatgatg gtgttaagct gtacaccctg gcaggttatc 1260  
 ctgtctgagg agaaagtgtg caattgatct ttttttaatt tagtataagt catgaataat 1320  
 gtaaattgcct gttttcttta ggatataaag agagccttag agtgcgtgag tctctacatg 1380  
 taattgtcat aaatgcattc tgttgataca aaccactgtg aacaattttt tttccagttt 1440  
 gtttgaaagg gactgctttc cctcattgtc ttgtcatgta caaactagtg tctgcagctg 1500  
 tggcagcagg agtgacctgc ctgccgccag ccctgcccag actatctgaa gcacactcct 1560  
 tcccactgca catttaataa tgattaaagc cattcttttc aatgtctgtg attccttcct 1620  
 aaagccaaag tttctgttgg actgtatggc acgccctggg gatgagggtg ccagggcac 1680

78063.txt

gaggctgcgt gcacaggccg cctccctccg tggggcctca gaagcagggtt attttaacta 1740  
gcaatagtgg tatagtgctg agtaagctat taatgatgga agttaatgac actttgtaca 1800  
gttcccatat agtctattca ctgagtgatc tttttacagt tggatcaggc ctgaaccggt 1860  
ccattcagaa agcttcaa at tatagaaaca acactgtcct atacgagtga ccgataatgc 1920  
tttctttggc tacattcttt attctgcggt gacattgagg cttataaatc aaaaggaact 1980  
aacttgccgt ccaccgggtt atacagaact cacagtatct atgacttttt taaactacga 2040  
cctgttaa at gaatctgttt gcacagatgc ccgtgtacaa tgccatgtgc tgagaatggt 2100  
ttcagactta ttaa atgcaa gcttggt 2127

<210> 30  
<211> 323  
<212> PRT  
<213> Murinae gen. sp.

<400> 30

Met Ala Asp Ile Asp Lys Leu Asn Ile Asp Ser Ile Ile Gln Arg Leu  
1 5 10 15

Leu Glu Val Arg Gly Ser Lys Pro Gly Lys Asn Val Gln Leu Gln Glu  
20 25 30

Asn Glu Ile Arg Gly Leu Cys Leu Lys Ser Arg Glu Ile Phe Leu Ser  
35 40 45

Gln Pro Ile Leu Leu Glu Leu Glu Ala Pro Leu Lys Ile Cys Gly Asp  
50 55 60

Ile His Gly Gln Tyr Tyr Asp Leu Leu Arg Leu Phe Glu Tyr Gly Gly  
65 70 75 80

Phe Pro Pro Glu Ser Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg  
85 90 95

Gly Lys Gln Ser Leu Glu Thr Ile Cys Leu Leu Leu Ala Tyr Lys Ile  
100 105 110

Lys Tyr Pro Glu Asn Phe Phe Leu Leu Arg Gly Asn His Glu Cys Ala  
115 120 125

Ser Ile Asn Arg Ile Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Tyr  
130 135 140

Asn Ile Lys Leu Trp Lys Thr Phe Thr Asp Cys Phe Asn Cys Leu Pro  
145 150 155 160

78063.txt

Ile Ala Ala Ile Val Asp Glu Lys Ile Phe Cys Cys His Gly Gly Leu  
165 170 175

Ser Pro Asp Leu Gln Ser Met Glu Gln Ile Arg Arg Ile Met Arg Pro  
180 185 190

Thr Asp Val Pro Asp Gln Gly Leu Leu Cys Asp Leu Leu Trp Ser Asp  
195 200 205

Pro Asp Lys Asp Val Leu Gly Trp Gly Glu Asn Asp Arg Gly Val Ser  
210 215 220

Phe Thr Phe Gly Ala Glu Val Val Ala Lys Phe Leu His Lys His Asp  
225 230 235 240

Leu Asp Leu Ile Cys Arg Ala His Gln Val Val Glu Asp Gly Tyr Glu  
245 250 255

Phe Phe Ala Lys Arg Gln Leu Val Thr Leu Phe Ser Ala Pro Asn Tyr  
260 265 270

Cys Gly Glu Phe Asp Asn Ala Gly Ala Met Met Ser Val Asp Glu Thr  
275 280 285

Leu Met Cys Ser Phe Gln Ile Leu Lys Pro Ala Glu Lys Lys Lys Pro  
290 295 300

Asn Ala Thr Arg Pro Val Thr Pro Pro Arg Gly Met Ile Thr Lys Gln  
305 310 315 320

Ala Lys Lys

<210> 31  
<211> 993  
<212> DNA  
<213> Homo sapiens

<400> 31  
atgtccgaca gcgagaagct caacctggac tcgatcatcg ggcgcctgct ggaagtgcag 60  
ggctcgcggc ctggcaagaa tgtacagctg acagagaacg agatccgcgg tctgtgcctg 120  
aatcccggg agatttttct gagccagccc attcttctgg agctggaggc acccctcaag 180  
atctgcggtg acatacacgg ccagtactac gaccttctgc gactatttga gtatggcggt 240  
ttccctcccg agagcaacta cctctttctg ggggactatg tggacagggg caagcagtcc 300  
ttggagacca tctgcctgct gctggcctat aagatcaagt accccgagaa cttcttcctg 360

78063.txt

```
ctccgtggga accacgagtg tgccagcatc aaccgcatct atggttttcta cgatgagtg 420
aagagacgct acaacatcaa actgtggaaa accttcactg actgcttcaa ctgcctgccc 480
atcgcgcca tagtggacga aaagatcttc tgctgccacg gaggcctgtc cccggacctg 540
cagtctatgg agcagattcg gcggatcatg cggcccacag atgtgcctga ccagggcctg 600
ctgtgtgacc tgctgtgggtc tgaccctgac aaggacgtgc agggctgggg cgagaacgac 660
cgtggcgtct cttttacctt tggagccgag gtggtggcca agttcctcca caagcacgac 720
ttggacctca tctgccgagc acaccaggtg gtagaagacg gctacgagtt ctttgccaag 780
cggcagctgg tgacactttt ctcagctccc aactactgtg gcgagtttga caatgctggc 840
gccatgatga gtgtggacga gaccctcatg tgctctttcc agatcctcaa gcccgccgac 900
aagaacaagg ggaagtacgg gcagttcagt ggcctgaacc ctggaggccg acccatcacc 960
ccaccccgca attccgcca agccaagaaa tag 993
```

```
<210> 32
<211> 330
<212> PRT
<213> Homo sapiens
```

```
<400> 32
```

```
Met Ser Asp Ser Glu Lys Leu Asn Leu Asp Ser Ile Ile Gly Arg Leu
1 5 10 15
```

```
Leu Glu Val Gln Gly Ser Arg Pro Gly Lys Asn Val Gln Leu Thr Glu
20 25 30
```

```
Asn Glu Ile Arg Gly Leu Cys Leu Lys Ser Arg Glu Ile Phe Leu Ser
35 40 45
```

```
Gln Pro Ile Leu Leu Glu Leu Glu Ala Pro Leu Lys Ile Cys Gly Asp
50 55 60
```

```
Ile His Gly Gln Tyr Tyr Asp Leu Leu Arg Leu Phe Glu Tyr Gly Gly
65 70 75 80
```

```
Phe Pro Pro Glu Ser Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg
85 90 95
```

```
Gly Lys Gln Ser Leu Glu Thr Ile Cys Leu Leu Leu Ala Tyr Lys Ile
100 105 110
```

```
Lys Tyr Pro Glu Asn Phe Phe Leu Leu Arg Gly Asn His Glu Cys Ala
115 120 125
```

Ser Ile Asn Arg Ile Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Tyr  
 130 135 140

Asn Ile Lys Leu Trp Lys Thr Phe Thr Asp Cys Phe Asn Cys Leu Pro  
 145 150 155 160

Ile Ala Ala Ile Val Asp Glu Lys Ile Phe Cys Cys His Gly Gly Leu  
 165 170 175

Ser Pro Asp Leu Gln Ser Met Glu Gln Ile Arg Arg Ile Met Arg Pro  
 180 185 190

Thr Asp Val Pro Asp Gln Gly Leu Leu Cys Asp Leu Leu Trp Ser Asp  
 195 200 205

Pro Asp Lys Asp Val Gln Gly Trp Gly Glu Asn Asp Arg Gly Val Ser  
 210 215 220

Phe Thr Phe Gly Ala Glu Val Val Ala Lys Phe Leu His Lys His Asp  
 225 230 235 240

Leu Asp Leu Ile Cys Arg Ala His Gln Val Val Glu Asp Gly Tyr Glu  
 245 250 255

Phe Phe Ala Lys Arg Gln Leu Val Thr Leu Phe Ser Ala Pro Asn Tyr  
 260 265 270

Cys Gly Glu Phe Asp Asn Ala Gly Ala Met Met Ser Val Asp Glu Thr  
 275 280 285

Leu Met Cys Ser Phe Gln Ile Leu Lys Pro Ala Asp Lys Asn Lys Gly  
 290 295 300

Lys Tyr Gly Gln Phe Ser Gly Leu Asn Pro Gly Gly Arg Pro Ile Thr  
 305 310 315 320

Pro Pro Arg Asn Ser Ala Lys Ala Lys Lys  
 325 330

<210> 33  
 <211> 747  
 <212> DNA  
 <213> Murinae gen. sp.

<220>  
 <221> misc\_feature  
 <222> (298)..(298)  
 <223> n is a, c, g, or t

## 78063.txt

&lt;400&gt; 33

```

cgacaagtca tgctgctcgc tatgaataag gttgaaggag acaacattag cggcgtttgc      60
ttcgttggcc tgtatgacct ggacgcctct cgctacttcg tccttctgcc tctgtgcctc      120
tgcgtatttg ttgagctggg agagtagccc agtggtacag cgcccacctg gaatacttga      180
ggacctgggg ttgtctccca gcactgcaaa aggaaaattc actgttacag tcttccttgc      240
acttaaacca gctttgtcta ttgttttttt ggtttggctt tgttactttt gttgctgntt      300
atTTTTgttg ttgttgtttg tttgtttgag acagggtttt tttgctagcc ctgactgtcc      360
tgaaactccc tctgtagacc aggctggcct caaacttaca gagatccgcc tgcctcagcc      420
tccaagtgc tgggaataat ggtgtggtca ccaccgcca gccttttgtc tattttttaa      480
cttgaaagaa acaacagccc agatttcaaa aataatataa tgcacttata cctaaaaaaa      540
caaccaggag tgcccagtta ataacatttt ttaaattgtg ggatgggaag ggcattagag      600
gagtcttcct tctattgaag attcattaaa gtatttaaga tatgcccttt cactctttat      660
ataaatccaa gatTTTTctt tgctgaagta tttaaaactt ttgtaccttt atatgtagat      720
atgaatttga aaatatgctt atgtgta      747

```

&lt;210&gt; 34

&lt;211&gt; 2021

&lt;212&gt; DNA

&lt;213&gt; Murinae gen. sp.

&lt;400&gt; 34

```

gggcaagaaa cttcaacaga agtccacacc tccccagaag catccgtcaa agagggacga      60
gcagaccgag caaacactcc cagcgccaaa gatcgggact gtgggggaatc tgcagggccc      120
agttccaagc tctctgggaa ccggaacggc agggaaagcc gagcgggcgg cctgaaggag      180
agaagcaatg gatcagaggg ggctccaagt gaaggaaggg taagtccaaa gagcagcggt      240
cctgagactg gcctgataga ctgcagcact tcacaggccg ccagttctcc agaaccaacc      300
agcctcaagg gctccacatc tctgcctggt cactcagctt ccagagctag gaaagagcag      360
ggtgctggca gccattccga cgcttgaaga aaactgtctc gttccccccag aagcacatgt      420
atgttacact ggagatgacc aactgatttg tcttataaag gccactgttg agctgggaga      480
gtagcccagt ggtacagcgc ccacctggaa tacttgagga cctgggggttg tctcccagca      540
ctgcaaaaagg aaaattcact gttacagtct tccttgact taaaccagct ttgtctattg      600
tttttttggt ttggctttta tttttgttgc tgttattttt gttgttggtt gtttgttttt      660
ttgtttgttt gtttgagaca gggtttcttt gctagccctg actgtcctga aactccctct      720
gtagaccagg ctggcctcaa acttacagag atctgcctgc ctcagcctcc cgagtgcctg      780
gaataatggt gtggtcacca ctgcccagcc ttttgtctgt ttttaaactt gaaagaaaca      840
acagcccaga tttcaaaaat aatataatgc atttatacct aaaaaaccaa ccaggagtgc      900

```

78063.txt

```

ccagttaata acacttttta aatgtgggga tgggaagggc attagaggag tcttccttct 960
attgaagatt cattaaagta ttttaagata tgctctttca ctctttatat aaatccaaga 1020
tttttctttg ctgaagtatt taaaactttt gtacctttat atgtagatat gaatttgaaa 1080
atatgcttat gtgtatttga acttttgaaa atcctagaga attgaatcaa atatttttat 1140
gatgtttttc tactatttta gctactttgc gactgtgata gctgttacac tggattttta 1200
aaaaacttgt acagcagcct ctttacagta aaaagagtgg gtgtcacact gaaaggtctg 1260
taagaagtgg tcacagccac ccctaccttc cccaaaagga ggaacttggg ggcaggtccc 1320
tccctgattg gactgtccct ttctttctgc atgttataaa tcagcaggta agatggtagg 1380
tttttacaag ttaggccgag ctgtcgattc cccttttaag tgttgaatta ggattgaatt 1440
atggccattt gtagttgctc gtgcctgtct ttattttagt attttatttc ccgagacagg 1500
aactcactgt gtggtgctcc ttggctgtct ggtgttcagt ctgtcccagg caggtcacag 1560
agatctcccc ctctgcagcc cactcatctc tccaagcca ccacactcag cttttatctg 1620
ttttaaaaat ttaaacttaa aaaaatgttt ttggaatagt acaaacacat tgtgttgtaa 1680
atttctttga tgctatgcaa aattcctatc tgcattctaa cctgcaaaag aaaatgtgcg 1740
aagggcagag tcagagttgg gcaggaagag tgtagtgcag cagatgcagc gtgaagacac 1800
tgaaggtgct aagacagcgt ctcagtgcgt gtcctcctta aggattatct cgccagcgag 1860
gttttcttag atactttgat cccattggag ctctgttaaa gtttaaaatg aaaattatca 1920
tgtactgtat gggaaatgta aatactaact tttccacata tgtaaacttc agacacaaat 1980
ttttttgtgt gttcttttca tcaataaaat tttctttgta t 2021

```

<210> 35  
 <211> 709  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 35

Met Glu Arg Ser Pro Phe Leu Leu Ala Cys Ile Leu Leu Pro Leu Val  
 1 5 10 15

Arg Gly His Ser Leu Phe Thr Cys Glu Pro Ile Thr Val Pro Arg Cys  
 20 25 30

Met Lys Met Thr Tyr Asn Met Thr Phe Phe Pro Asn Leu Met Gly His  
 35 40 45

Tyr Asp Gln Gly Ile Ala Ala Val Glu Met Gly His Phe Leu His Leu  
 50 55 60



Ala Asn Leu Glu Cys Ser Pro Asn Ile Glu Met Phe Leu Cys Gln Ala  
 65 70 75 80  
 Phe Ile Pro Thr Cys Thr Glu Gln Ile His Val Val Leu Pro Cys Arg  
 85 90 95  
 Lys Leu Cys Glu Lys Ile Val Ser Asp Cys Lys Lys Leu Met Asp Thr  
 100 105 110  
 Phe Gly Ile Arg Trp Pro Glu Glu Leu Glu Cys Asn Arg Leu Pro His  
 115 120 125  
 Cys Asp Asp Thr Val Pro Val Thr Ser His Pro His Thr Glu Leu Ser  
 130 135 140  
 Gly Pro Gln Lys Lys Ser Asp Gln Val Pro Arg Asp Ile Gly Phe Trp  
 145 150 155 160  
 Cys Pro Lys His Leu Arg Thr Ser Gly Asp Gln Gly Tyr Arg Phe Leu  
 165 170 175  
 Gly Ile Glu Gln Cys Ala Pro Pro Cys Pro Asn Met Tyr Phe Lys Ser  
 180 185 190  
 Asp Glu Leu Asp Phe Ala Lys Ser Phe Ile Gly Ile Val Ser Ile Phe  
 195 200 205  
 Cys Leu Cys Ala Thr Leu Phe Thr Phe Leu Thr Phe Leu Ile Asp Val  
 210 215 220  
 Arg Arg Phe Arg Tyr Pro Glu Arg Pro Ile Ile Tyr Tyr Ser Val Cys  
 225 230 235 240  
 Tyr Ser Ile Val Ser Leu Met Tyr Phe Val Gly Phe Leu Leu Gly Asn  
 245 250 255  
 Ser Thr Ala Cys Asn Lys Ala Asp Glu Lys Leu Glu Leu Gly Asp Thr  
 260 265 270  
 Val Val Leu Gly Ser Lys Asn Lys Ala Cys Ser Val Val Phe Met Phe  
 275 280 285  
 Leu Tyr Phe Phe Thr Met Ala Gly Thr Val Trp Trp Val Ile Leu Thr  
 290 295 300  
 Ile Thr Trp Phe Leu Ala Ala Gly Arg Lys Trp Ser Cys Glu Ala Ile  
 305 310 315 320

## 78063.txt

Glu Gln Lys Ala Val Trp Phe His Ala Val Ala Trp Gly Ala Pro Gly  
 325 330 335  
 Phe Leu Thr Val Met Leu Leu Ala Met Asn Lys Val Glu Gly Asp Asn  
 340 345 350  
 Ile Ser Gly Val Cys Phe Val Gly Leu Tyr Asp Leu Asp Ala Ser Arg  
 355 360 365  
 Tyr Phe Val Leu Leu Pro Leu Cys Leu Cys Val Phe Val Gly Leu Ser  
 370 375 380  
 Leu Leu Leu Ala Gly Ile Ile Ser Leu Asn His Val Arg Gln Val Ile  
 385 390 395 400  
 Gln His Asp Gly Arg Asn Gln Glu Lys Leu Lys Lys Phe Met Ile Arg  
 405 410 415  
 Ile Gly Val Phe Ser Gly Leu Tyr Leu Val Pro Leu Val Thr Leu Leu  
 420 425 430  
 Gly Cys Tyr Val Tyr Glu Leu Val Asn Arg Ile Thr Trp Glu Met Thr  
 435 440 445  
 Trp Phe Ser Asp His Cys His Gln Tyr Arg Ile Pro Cys Pro Tyr Gln  
 450 455 460  
 Ala Asn Pro Lys Ala Arg Pro Glu Leu Ala Leu Phe Met Ile Lys Tyr  
 465 470 475 480  
 Leu Met Thr Leu Ile Val Gly Ile Ser Ala Val Phe Trp Val Gly Ser  
 485 490 495  
 Lys Lys Thr Cys Thr Glu Trp Ala Gly Phe Phe Lys Arg Asn Arg Lys  
 500 505 510  
 Arg Asp Pro Ile Ser Glu Ser Arg Arg Val Leu Gln Glu Ser Cys Glu  
 515 520 525  
 Phe Phe Leu Lys His Asn Ser Lys Val Lys His Lys Lys Lys His Gly  
 530 535 540  
 Ala Pro Gly Pro His Arg Leu Lys Val Ile Ser Lys Ser Met Gly Thr  
 545 550 555 560  
 Ser Thr Gly Ala Thr Thr Asn His Gly Thr Ser Ala Met Ala Ile Ala  
 565 570 575

78063.txt

Asp His Asp Tyr Leu Gly Gln Glu Thr Ser Thr Glu Val His Thr Ser  
580 585 590

Pro Glu Ala Ser Val Lys Glu Gly Arg Ala Asp Arg Ala Asn Thr Pro  
595 600 605

Ser Ala Lys Asp Arg Asp Cys Gly Glu Ser Ala Gly Pro Ser Ser Lys  
610 615 620

Leu Ser Gly Asn Arg Asn Gly Arg Glu Ser Arg Ala Gly Gly Leu Lys  
625 630 635 640

Glu Arg Ser Asn Gly Ser Glu Gly Ala Pro Ser Glu Gly Arg Val Ser  
645 650 655

Pro Lys Ser Ser Val Pro Glu Thr Gly Leu Ile Asp Cys Ser Thr Ser  
660 665 670

Gln Ala Ala Ser Ser Pro Glu Pro Thr Ser Leu Lys Gly Ser Thr Ser  
675 680 685

Leu Pro Val His Ser Ala Ser Arg Ala Arg Lys Glu Gln Gly Ala Gly  
690 695 700

Ser His Ser Asp Ala  
705

<210> 36  
<211> 2039  
<212> DNA  
<213> Homo sapiens

<400> 36  
aggagacaac attagtggag ttgctttgt tggcctttat gacctggatg cttctcgcta 60  
ctttgtactc ttgccactgt gcctttgtgt gtttgttggg ctctctcttc ttttagctgg 120  
cattatttcc ttaaatacatg ttcgacaagt catacaacat gatggccgga accaagaaaa 180  
actaaagaaa tttatgattc gaattggagt cttcagcggc ttgtatcttg tgccattagt 240  
gacacttctc ggatgttacg tctatgagca agtgaacagg attacctggg agataacttg 300  
ggctctctgat cattgtcgtc agtaccatat cccatgtcct tatcaggcaa aagcaaaagc 360  
tcgaccagaa ttggctttat ttatgataaa atacctgatg acattaattg ttggcatctc 420  
tgctgtcttc tgggttgga gcaaaaagac atgcacagaa tgggctgggt tttttaaacg 480  
aatcgcaag agagatccaa tcagtgaag tcgaagagta ctacaggaat catgtgagtt 540  
tttcttaaag cacaattcta aagttaaaca caaaaagaag cactataaac caagttcaca 600

78063.txt

caagctgaag gtcattttcca aatccatggg aaccagcaca ggagctacag caaatcatgg 660  
cactttctgca gtagcaatta ctagccatga ttacctagga caagaaactt tgacagaaat 720  
ccaaacctca ccagaaacat caatgagaga ggtgaaagcg gacggagcta gcacccccag 780  
gttaagagaa caggactgtg gtgaacctgc ctgcgcagca gcatccatct ccagactctc 840  
tggggaacag gtcgacggga agggccaggc aggcagtgtg tctgaaagtg cgcggagtga 900  
aggaaggatt agtccaaaga gtgatattac tgacactggc ctggcacaga gcaacaattt 960  
gcagggtcccc agttcttcag aaccaagcag cctcaaaggt tccacatctc tgcttggtca 1020  
cccggtttca ggagtgagaa aagagcaggg aggtggttgt cattcagata cttgaagaac 1080  
attttctctc gttactcaga agcaaatttg tgttacactg gaagtgcct atgcactgtt 1140  
ttgtaagaat cactgttaca ttcttctttt gcacttaaag ttgcattgcc tactgttata 1200  
ctggaaaaaa tagagttcaa gaataatatg actcatttca cacaaagggt aatgacaaca 1260  
atatacctga aaacagaaaa tgtgcagggt aataatattt ttttaatagt gtgggaggac 1320  
agagttagag gaatcttcct tttctattta tgaagattct actcttggtg agagtatttt 1380  
aagatgtact atgctatttt acttttttga tataaaatca agatatttct ttgctgaagt 1440  
atttaaactt tatccttgta tctttttata catatttgaa aataagctta tatgtatttg 1500  
aacttttttg aaatcctatt caagtatttt tatcatgcta ttgtgatatt ttagcacttt 1560  
ggtagctttt acactgaatt tctaagaaaa ttgtaaaata gtcttctttt atactgtaaa 1620  
aaaagatata ccaaaaagtc ttataatagg aatttaactt taaaaacca cttattgata 1680  
ccttaccatc taaaatgtgt gattttttata gtctcgtttt aggaatttca cagatctaaa 1740  
ttatgtaact gaaataaggt gcttactcaa agagtgtcca ctattgattg tattatgctg 1800  
ctcactgatc cttctgcata tttaaaataa aatgtcctaa agggttagta gacaaaatgt 1860  
tagtcttttg tatattaggc caagtgcaat tgacttccct tttttaatgt ttcatgacca 1920  
cccattgatt gtattataac cacttacagt tgcttatatt ttttgtttta acttttgttt 1980  
tttaacattt agaatattac attttgtatt atacagtacc tttctcagac attttgtag 2039

<210> 37  
<211> 706  
<212> PRT  
<213> Homo sapiens

<400> 37

Met Glu Met Phe Thr Phe Leu Leu Thr Cys Ile Phe Leu Pro Leu Leu  
1 5 10 15

Arg Gly His Ser Leu Phe Thr Cys Glu Pro Ile Thr Val Pro Arg Cys  
20 25 30

78063.txt

Met Lys Met Ala Tyr Asn Met Thr Phe Phe Pro Asn Leu Met Gly His  
35 40 45

Tyr Asp Gln Ser Ile Ala Ala Val Glu Met Glu His Phe Leu Pro Leu  
50 55 60

Ala Asn Leu Glu Cys Ser Pro Asn Ile Glu Thr Phe Leu Cys Lys Ala  
65 70 75 80

Phe Val Pro Thr Cys Ile Glu Gln Ile His Val Val Pro Pro Cys Arg  
85 90 95

Lys Leu Cys Glu Lys Val Tyr Ser Asp Cys Lys Lys Leu Ile Asp Thr  
100 105 110

Phe Gly Ile Arg Trp Pro Glu Glu Leu Glu Cys Asp Arg Leu Gln Tyr  
115 120 125

Cys Asp Glu Thr Val Pro Val Thr Phe Asp Pro His Thr Glu Phe Leu  
130 135 140

Gly Pro Gln Lys Lys Thr Glu Gln Val Gln Arg Asp Ile Gly Phe Trp  
145 150 155 160

Cys Pro Arg His Leu Lys Thr Ser Gly Gly Gln Gly Tyr Lys Phe Leu  
165 170 175

Gly Ile Asp Gln Cys Ala Pro Pro Cys Pro Asn Met Tyr Phe Lys Ser  
180 185 190

Asp Glu Leu Glu Phe Ala Lys Ser Phe Ile Gly Thr Val Ser Ile Phe  
195 200 205

Cys Leu Cys Ala Thr Leu Phe Thr Phe Leu Thr Phe Leu Ile Asp Val  
210 215 220

Arg Arg Phe Arg Tyr Pro Glu Arg Pro Ile Ile Tyr Tyr Ser Val Cys  
225 230 235 240

Tyr Ser Ile Val Ser Leu Met Tyr Phe Ile Gly Phe Leu Leu Gly Asp  
245 250 255

Ser Thr Ala Cys Asn Lys Ala Asp Glu Lys Leu Glu Leu Gly Asp Thr  
260 265 270

Val Val Leu Gly Ser Gln Asn Lys Ala Cys Thr Val Leu Phe Met Leu  
Page 41

275

280

285

Leu Tyr Phe Phe Thr Met Ala Gly Thr Val Trp Trp Val Ile Leu Thr  
 290 295 300

Ile Thr Trp Phe Leu Ala Ala Gly Arg Lys Trp Ser Cys Glu Ala Ile  
 305 310 315 320

Glu Gln Lys Ala Val Trp Phe His Ala Val Ala Trp Gly Thr Pro Gly  
 325 330 335

Phe Leu Thr Val Met Leu Leu Ala Met Asn Lys Val Glu Gly Asp Asn  
 340 345 350

Ile Ser Gly Val Cys Phe Val Gly Leu Tyr Asp Leu Asp Ala Ser Arg  
 355 360 365

Tyr Phe Val Leu Leu Pro Leu Cys Leu Cys Val Phe Val Gly Leu Ser  
 370 375 380

Leu Leu Leu Ala Gly Ile Ile Ser Leu Asn His Val Arg Gln Val Ile  
 385 390 395 400

Gln His Asp Gly Arg Asn Gln Glu Lys Leu Lys Lys Phe Met Ile Arg  
 405 410 415

Ile Gly Val Phe Ser Gly Leu Tyr Leu Val Pro Leu Val Thr Leu Leu  
 420 425 430

Gly Cys Tyr Val Tyr Glu Gln Val Asn Arg Ile Thr Trp Glu Ile Thr  
 435 440 445

Trp Val Ser Asp His Cys Arg Gln Tyr His Ile Pro Cys Pro Tyr Gln  
 450 455 460

Ala Lys Ala Lys Ala Arg Pro Glu Leu Ala Leu Phe Met Ile Lys Tyr  
 465 470 475 480

Leu Met Thr Leu Ile Val Gly Ile Ser Ala Val Phe Trp Val Gly Ser  
 485 490 495

Lys Lys Thr Cys Thr Glu Trp Ala Gly Phe Phe Lys Arg Asn Arg Lys  
 500 505 510

Arg Asp Pro Ile Ser Glu Ser Arg Arg Val Leu Gln Glu Ser Cys Glu  
 515 520 525

Phe Phe Leu Lys His Asn Ser Lys Val Lys His Lys Lys Lys His Tyr  
 530 535 540

Lys Pro Ser Ser His Lys Leu Lys Val Ile Ser Lys Ser Met Gly Thr  
 545 550 555 560

Ser Thr Gly Ala Thr Ala Asn His Gly Thr Ser Ala Val Ala Ile Thr  
 565 570 575

Ser His Asp Tyr Leu Gly Gln Glu Thr Leu Thr Glu Ile Gln Thr Ser  
 580 585 590

Pro Glu Thr Ser Met Arg Glu Val Lys Ala Asp Gly Ala Ser Thr Pro  
 595 600 605

Arg Leu Arg Glu Gln Asp Cys Gly Glu Pro Ala Ser Pro Ala Ala Ser  
 610 615 620

Ile Ser Arg Leu Ser Gly Glu Gln Val Asp Gly Lys Gly Gln Ala Gly  
 625 630 635 640

Ser Val Ser Glu Ser Ala Arg Ser Glu Gly Arg Ile Ser Pro Lys Ser  
 645 650 655

Asp Ile Thr Asp Thr Gly Leu Ala Gln Ser Asn Asn Leu Gln Val Pro  
 660 665 670

Ser Ser Ser Glu Pro Ser Ser Leu Lys Gly Ser Thr Ser Leu Leu Val  
 675 680 685

His Pro Val Ser Gly Val Arg Lys Glu Gln Gly Gly Gly Cys His Ser  
 690 695 700

Asp Thr  
 705

<210> 38  
 <211> 773  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 38  
 ctgagggtgct agcaccagcc tggttgtctc tggcgggcct gaagcaagca tggatcaaga 60  
 ggctgtgggc aacgttgtgc tcctggccct tgtcaccctc atcagcgtgg tccagaatgc 120  
 gttctttgcc cacaaggtgg agcatgaaag caaggcgc ataatgggagaa gcttccagag 180  
 gaccgggact cttgcctttg agcgggtcta cactgccaac cagaactgcg tagatgcgta 240  
 cccactttc cttgtggtac tctggactgc aggactactt tgcagccaag tccctgcagc 300

78063.txt

cttcgccgga ctgatgtacc tgtttgtgag gcaaaaatac tttgtcggct atctgggaga	360
gagaactcag agcaccctg gctacatctt cggcaagcgg atcatcctgt tcctgttcct	420
catgtccttc gccgggatac tcaaccatta cctcatcttc ttcttcggaa gcgactttga	480
gaactacatc agaacggtaa gcacgacgat ctccccgctg cttctcatcc cctgattgct	540
ggagacagag aaggacgctc accagatcaa tagagacgca tcataacgca acgccgcgaa	600
ggcttctgct cctcttcaag ctgtagatgc tgtcaatctt gctgccctcg gggctctgtg	660
gcatccgtta actttgcttt tccgggaaga aaaatgtctt gtgctaagct ccaccctcg	720
aatgcggcgg tgggccagga tttatgtcta catccagcct atacttctcc tgg	773

<210> 39  
 <211> 852  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 39	
ggaaggctga ggtgctagca ccagcctggt tgtctctggc gggcctgaag caagcatgga	60
tcaagaggct gtgggcaacg ttgtgctcct ggcccttgct accctcatca gcgtgggtcca	120
gaatgtgttt ttgcccact atgtggagca tgaaagcaat gcgcataatg ggagaagctt	180
ccagaggacc gggactcttg cctttgagcg ggtctacact gccaaccaga actgcgtaga	240
tgcgtagccc actttccttg tggtagctg gactgcagga ctactttgca gccaagtccc	300
tgccgccttc gccggactga tgtacctgtt tgtgaggcaa aaatactttg tcggctatct	360
gggagagaga actcagagca cccctggcta catcttcggc aagcggatca tcctgttcct	420
gttcctcatg tccttcgccg ggataactcaa ccattacctc atcttcttct tcggaagcga	480
ctttgagaac tacatcagaa cggtaaagcac gacgatctcc ccgctgcttc tcatccctg	540
attgctggag acagagaagg acgctacca gatcaataga gacgcatcat aacgcaacgc	600
cgcgaggct tctgctcctc ttcaagctgt agatgctgtc aatcttgctg ccctcggggc	660
tctgtggcat ccgttaactt tgcttttccg ggaagaaaaa tgtcttgtgc tagctccacc	720
cctcgaatgc ggcggtggcc caggatttat tgtctacatc cagcctatac ttctcctggc	780
ttatcctgct ttctgaagat gtcttgtaat cagacacgtg ttttcctaaa ataaagggta	840
tagacaaaat tt	852

<210> 40  
 <211> 161  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 40

Met Asp Gln Glu Ala Val Gly Asn Val Val Leu Leu Ala Leu Val Thr  
 Page 44



1 5 15  
Leu Ile Ser Val Val Gln Asn Val Phe Phe Ala His Tyr Val Glu His  
20 25 30  
Glu Ser Asn Ala His Asn Gly Arg Ser Phe Gln Arg Thr Gly Thr Leu  
35 40 45  
Ala Phe Glu Arg Val Tyr Thr Ala Asn Gln Asn Cys Val Asp Ala Tyr  
50 55 60  
Pro Thr Phe Leu Val Val Leu Trp Thr Ala Gly Leu Leu Cys Ser Gln  
65 70 75 80  
Val Pro Ala Ala Phe Ala Gly Leu Met Tyr Leu Phe Val Arg Gln Lys  
85 90 95  
Tyr Phe Val Gly Tyr Leu Gly Glu Arg Thr Gln Ser Thr Pro Gly Tyr  
100 105 110  
Ile Phe Gly Lys Arg Ile Ile Leu Phe Leu Phe Leu Met Ser Phe Ala  
115 120 125  
Gly Ile Leu Asn His Tyr Leu Ile Phe Phe Phe Gly Ser Asp Phe Glu  
130 135 140  
Asn Tyr Ile Arg Thr Val Ser Thr Thr Ile Ser Pro Leu Leu Leu Ile  
145 150 155 160

Pro

<210> 41  
<211> 873  
<212> DNA  
<213> Homo sapiens

<400> 41  
acttcccctt cctgtacagg gcaggttgtg cagctggagg cagagcagtc ctctctgggg 60  
agcctgaagc aaacatggat caagaaactg taggcaatgt tgtcctgttg gccatcgtca 120  
ccctcatcag cgtgggtccag aatggattct ttgcccataa agtggagcac gaaagcagga 180  
cccagaatgg gaggagcttc cagaggaccg gaacacttgc ctttgagcgg gtctacactg 240  
ccaaccagaa ctgtgtagat gcgtaccca ctttcctcgc tgtgctctgg tctgcggggc 300  
tactttgcag ccaagttcct gctgcgtttg ctggactgat gtacttgttt gtgaggcaaa 360  
agtactttgt cggttaccta ggagagagaa cgcagagcac ccctggctac atatttgga 420

## 78063.txt

```

aacgcatcat actcttcctg ttcctcatgt ccgttgctgg catattcaac tattacctca 480
tcttcttttt cggaagtgac ttgaaaact acataaagac gatctccacc accatctccc 540
ctctacttct cattccctaa ctctctgctg aatatggggg tgggtgttctc atctaataca 600
tacctacaag tcatacataat tcagctcttg agagcattct gctcttcttt agatggctgt 660
aaatctattg gccatctggg cttcacagct tgagttaacc ttgcttttcc gggaacaaaa 720
tgatgtcatg tcagctccgc cccttgaaca tgaccgtggc cccaaatttg ctattcccat 780
gcattttgtt tgtttcttca cttatcctgt tctctgaaga tgttttgtga ccaggtttgt 840
gttttcttaa aataaaatgc agagacatgt ttt 873

```

```

<210> 42
<211> 161
<212> PRT
<213> Homo sapiens
<400> 42

```

```

Met Asp Gln Glu Thr Val Gly Asn Val Val Leu Leu Ala Ile Val Thr
1          5          10

```

```

Leu Ile Ser Val Val Gln Asn Gly Phe Phe Ala His Lys Val Glu His
          20          25          30

```

```

Glu Ser Arg Thr Gln Asn Gly Arg Ser Phe Gln Arg Thr Gly Thr Leu
          35          40          45

```

```

Ala Phe Glu Arg Val Tyr Thr Ala Asn Gln Asn Cys Val Asp Ala Tyr
          50          55          60

```

```

Pro Thr Phe Leu Ala Val Leu Trp Ser Ala Gly Leu Leu Cys Ser Gln
65          70          75          80

```

```

Val Pro Ala Ala Phe Ala Gly Leu Met Tyr Leu Phe Val Arg Gln Lys
          85          90          95

```

```

Tyr Phe Val Gly Tyr Leu Gly Glu Arg Thr Gln Ser Thr Pro Gly Tyr
          100          105          110

```

```

Ile Phe Gly Lys Arg Ile Ile Leu Phe Leu Phe Leu Met Ser Val Ala
          115          120          125

```

```

Gly Ile Phe Asn Tyr Tyr Leu Ile Phe Phe Phe Gly Ser Asp Phe Glu
          130          135          140

```

```

Asn Tyr Ile Lys Thr Ile Ser Thr Thr Ile Ser Pro Leu Leu Leu Ile
145          150          155          160

```

Pro

<210> 43  
 <211> 803  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 43  
 ttcagcttta tgggttggct tccttgactg cattttctgt cagttaacta aactccagac 60  
 tcatggattt tctcgaccag aaaatcagac tattttcctg aataatctac tagaaacttt 120  
 tacggaacac atttcatggt tcctttgaag agttaagaga agaaagtatt tgtaagaaca 180  
 ggaaaagaaa caaatacttt gcaaataaac tggctgctgc tgtgaccaca tctgaatagc 240  
 aaaggcgatc gatcaagcgc tgcggacaaa aggccctcctg taagctgcac tgcctgacaa 300  
 tggtaagctc caatggctcc cagtgccctt atgacgactc ctttaagtac actctgtacg 360  
 ggtgcatggt cagcatggct ttcgtgcttg ggctgatatc caactgtggt gcgatataca 420  
 ttttcatctg tgccctcaaa gtgagaaatg aaactacaac gtacatgatt aacctggcaa 480  
 tgtcagattt acttttcgtc tttactttgc catttcggat tttttacttt gcaacacgga 540  
 attggccatt tggagatcta ctctgtaaga tttcagtaat gctgttttac accaatatgt 600  
 atgggaagca ttctgttctt aacctgtatc agtgtagatc gatttctggc aattgtctac 660  
 ccatttaagt caaagacttt aagaaacgaa acgaaaatgc aaagaatcgt ttgcattgcc 720  
 tgtgtggttc acagtgatgg gaggaagtgc gctgcagttt tctttcagtc gaccactct 780  
 caggggaaca atactcagaa gct 803

<210> 44  
 <211> 1849  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 44  
 agagacagcc catctcacia tacagctggc aacctccgaa aggccctctcc attcagcaag 60  
 cgcgaacatg cttaggaatt tatctgggat cccttaaacg actgcctatc gccgtccgga 120  
 atcaatgtag aaatacaaag tttgagaata aaaagaagga agaagtaccc gaggacgacg 180  
 ggcggacgga cgcacggcga gtgtttgtga ctgaagtaaa gctgggtttgg accctggcgg 240  
 ctgaagcaca agtttccacg cggactgggtc tgggtccgact tggaacagtt tttccttaca 300  
 ctttcagctt tatgggttgg cttccttgac tgcattttct gtcagttaac taaactccag 360  
 actcatggat tttctcgacc agaaaatcag actattttcc tgaataatct actagaaact 420  
 tttacggaac acatttcatg tttcctttga agagttaaga gaagaaagta tttgtaagaa 480  
 caggaaaaga aacaaatact ttgcaaataa actggctgct gctgtgacca catctgaata 540

78063.txt

```

gcaaaggcga tcgatcaagc gctgcggaca aaaggcctcc tgtaagctgc actgcctgac 600
aatggtaagc tccaatggct cccagtgtcc ttatgacgac tcctttaagt acactctgta 660
cgggtgcatg ttcagcatgg tcttcgtgct tgggctgata tccaactgtg ttgcgatata 720
cattttcatc tgtgccctca aagtgagaaa tgaaactaca acgtacatga ttaacctggc 780
aatgtcagat ttacttttcg tctttacttt gccatttcgg attttttact ttgcaacacg 840
gaattggcca tttggagatc tactctgtaa gatttcagta atgctgtttt acaccaatat 900
gtatggaagc attctgttct taacctgtat cagtgtagat cgatttctgg caattgtcta 960
cccatTTaag tcaaagactt taagaacgaa acgaaatgca aagatcgttt gcattgctgt 1020
gtggttcaca gtgatgggag gaagtgcgcc tgcagttttc tttcagtcga cccactctca 1080
ggggaacaat acctcagaag cctgctttga gaactttcca gcggccacat ggaaaactta 1140
tctctccagg attgtgattt tcattgaaat agtgggcttt tttatccctc tcattttgaa 1200
cgtaacttgt tctagtatgg tgctaagaac tttaaataaa cctgtttacat taagtagaag 1260
caaatgaac aaaactaagg ttttaaaaat gatttttgtc cacttggtca tcttctgttt 1320
ctgttttgtg ccctacaaca tcaacctcat tttgtactcg ctcattgagga cacagacctt 1380
tgttaactgc tctgtggtgg cggcagtgg gaccatgtac ccgatcactc tctgcatcgc 1440
tgtttccaac tgctgctttg accctattgt ttactacttc acctcagaca caattcagaa 1500
ctcaataaaa atgaaaaact ggtcggttag aagaagtgc tccaggttct ctgaagttca 1560
gggcactgag aattttatcc aacacaacct acagacctta aaaaataaga tatttgataa 1620
tgaatctgca atataagctg cctgactaag ccactgggac tgctccgtgt tcaactgtga 1680
aaactgtgtt cttgggaact atctctccgg ctccaacaga aaatatTTTT aaaggaagtt 1740
tgtgtctgat gtgttaaaca ttaaaatata ttctattctt gtatgcacgc cattttactt 1800
tcttgaacca ctttaacgtg ttttttcctc attaaaaaaa aaaaactcc 1849

```

<210> 45  
 <211> 316  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 45

```

Asp Asp Ser Phe Lys Tyr Thr Leu Tyr Gly Cys Met Phe Ser Met Val
1          5          10          15

Phe Val Leu Gly Leu Ile Ser Asn Cys Val Ala Ile Tyr Ile Phe Ile
          20          25          30

Cys Ala Leu Lys Val Arg Asn Glu Thr Thr Thr Tyr Met Ile Asn Leu
          35          40          45

```

## 78063.txt

Ala Met Ser Asp Leu Leu Phe Val Phe Thr Leu Pro Phe Arg Ile Phe  
 50 55 60  
 Tyr Phe Ala Thr Arg Asn Trp Pro Phe Gly Asp Leu Leu Cys Lys Ile  
 65 70 75 80  
 Ser Val Met Leu Phe Tyr Thr Asn Met Tyr Gly Ser Ile Leu Phe Leu  
 85 90 95  
 Thr Cys Ile Ser Val Asp Arg Phe Leu Ala Ile Val Tyr Pro Phe Lys  
 100 105 110  
 Ser Lys Thr Leu Arg Thr Lys Arg Asn Ala Lys Ile Val Cys Ile Ala  
 115 120 125  
 Val Trp Phe Thr Val Met Gly Gly Ser Ala Pro Ala Val Phe Phe Gln  
 130 135 140  
 Ser Thr His Ser Gln Gly Asn Asn Thr Ser Glu Ala Cys Phe Glu Asn  
 145 150 155 160  
 Phe Pro Ala Ala Thr Trp Lys Thr Tyr Leu Ser Arg Ile Val Ile Phe  
 165 170 175  
 Ile Glu Ile Val Gly Phe Phe Ile Pro Leu Ile Leu Asn Val Thr Cys  
 180 185 190  
 Ser Ser Met Val Leu Arg Thr Leu Asn Lys Pro Val Thr Leu Ser Arg  
 195 200 205  
 Ser Lys Met Asn Lys Thr Lys Val Leu Lys Met Ile Phe Val His Leu  
 210 215 220  
 Val Ile Phe Cys Phe Cys Phe Val Pro Tyr Asn Ile Asn Leu Ile Leu  
 225 230 235 240  
 Tyr Ser Leu Met Arg Thr Gln Thr Phe Val Asn Cys Ser Val Val Ala  
 245 250 255  
 Ala Val Arg Thr Met Tyr Pro Ile Thr Leu Cys Ile Ala Val Ser Asn  
 260 265 270  
 Cys Cys Phe Asp Pro Ile Val Tyr Tyr Phe Thr Ser Asp Thr Ile Gln  
 275 280 285  
 Asn Ser Ile Lys Met Lys Asn Trp Ser Val Arg Arg Ser Asp Ser Arg  
 Page 49

290

295

Phe Ser Glu Val Gln Gly Thr Glu Asn Phe Ile Gln  
305 310 315

<210> 46  
<211> 1035  
<212> DNA  
<213> Homo sapiens

<400> 46  
atggtaagcg ttaacagctc ccactgcttc tataatgact cctttaagta cactttgtat 60  
gggtgcatgt tcagcatggg gtttgtgctt gggttaatat ccaattgtgt tgccatatac 120  
attttcatct gcgtcctcaa agtccgaaat gaaactacaa cttacatgat taacttggca 180  
atgtcagact tgctttttgt ttttacttta cccttcagga ttttttactt cacaacacgg 240  
aattggccat ttggagattt actttgtaag atttctgtga tgctgtttta taccaacatg 300  
tacggaagca ttctgttctt aacctgtatt agtgtagatc gatttctggc aattgtctac 360  
ccatttaagt caaagactct aagaaccaa agaaatgcaa agattgtttg cactggcgtg 420  
tggttaactg tgatcggagg aagtgcaccc gccgtttttg ttcagtctac ccactctcag 480  
ggtaacaatg cctcagaagc ctgctttgaa aattttccag aagccacatg gaaaacatat 540  
ctctcaagga ttgtaatttt catcgaaata gtgggatttt ttattcctct aattttaaat 600  
gtaacttggt ctagtatggg gctaaaaact ttaaccaaac ctgttacatt aagtagaagc 660  
aaaataaaca aaactaagggt tttaaaaatg atttttgtac atttgatcat attctgtttc 720  
tgttttgttc cttacaatat caatcttatt ttatattctc ttgtgagaac acaaacattt 780  
gttaattgct cagtagtggc agcagtaagg acaatgtacc caatcactct ctgtattgct 840  
gtttccaact gttgttttga ccctatagtt tactacttta catcggacac aattcagaat 900  
tcaataaaaa tgaaaaactg gtctgtcagg agaagtgact tcagattctc tgaagttcat 960  
gggtgcagaga attttattca gcataaccta cagaccttaa aaagtaagat atttgacaat 1020  
gaatctgctg cctga 1035

<210> 47  
<211> 344  
<212> PRT  
<213> Homo sapiens

<400> 47  
Met Val Ser Val Asn Ser Ser His Cys Phe Tyr Asn Asp Ser Phe Lys  
1 5 10 15  
Tyr Thr Leu Tyr Gly Cys Met Phe Ser Met Val Phe Val Leu Gly Leu  
20 25 30

78063.txt

Ile Ser Asn Cys Val Ala Ile Tyr Ile Phe Ile Cys Val Leu Lys Val  
35 40 45

Arg Asn Glu Thr Thr Thr Tyr Met Ile Asn Leu Ala Met Ser Asp Leu  
50 55 60

Leu Phe Val Phe Thr Leu Pro Phe Arg Ile Phe Tyr Phe Thr Thr Arg  
65 70 75 80

Asn Trp Pro Phe Gly Asp Leu Leu Cys Lys Ile Ser Val Met Leu Phe  
85 90 95

Tyr Thr Asn Met Tyr Gly Ser Ile Leu Phe Leu Thr Cys Ile Ser Val  
100 105 110

Asp Arg Phe Leu Ala Ile Val Tyr Pro Phe Lys Ser Lys Thr Leu Arg  
115 120 125

Thr Lys Arg Asn Ala Lys Ile Val Cys Thr Gly Val Trp Leu Thr Val  
130 135 140

Ile Gly Gly Ser Ala Pro Ala Val Phe Val Gln Ser Thr His Ser Gln  
145 150 155 160

Gly Asn Asn Ala Ser Glu Ala Cys Phe Glu Asn Phe Pro Glu Ala Thr  
165 170 175

Trp Lys Thr Tyr Leu Ser Arg Ile Val Ile Phe Ile Glu Ile Val Gly  
180 185 190

Phe Phe Ile Pro Leu Ile Leu Asn Val Thr Cys Ser Ser Met Val Leu  
195 200 205

Lys Thr Leu Thr Lys Pro Val Thr Leu Ser Arg Ser Lys Ile Asn Lys  
210 215 220

Thr Lys Val Leu Lys Met Ile Phe Val His Leu Ile Ile Phe Cys Phe  
225 230 235 240

Cys Phe Val Pro Tyr Asn Ile Asn Leu Ile Leu Tyr Ser Leu Val Arg  
245 250 255

Thr Gln Thr Phe Val Asn Cys Ser Val Val Ala Ala Val Arg Thr Met  
260 265 270

Tyr Pro Ile Thr Leu Cys Ile Ala Val Ser Asn Cys Cys Phe Asp Pro  
Page 51

275

280

285

Ile Val Tyr Tyr Phe Thr Ser Asp Thr Ile Gln Asn Ser Ile Lys Met  
 290 295 300

Lys Asn Trp Ser Val Arg Arg Ser Asp Phe Arg Phe Ser Glu Val His  
 305 310 315 320

Gly Ala Glu Asn Phe Ile Gln His Asn Leu Gln Thr Leu Lys Ser Lys  
 325 330 335

Ile Phe Asp Asn Glu Ser Ala Ala  
 340

<210> 48  
 <211> 814  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 48  
 gagcgcgcgt aagatggcac taccattttc tgtcaacctt cgggggtgcgt aatggcctct 60  
 ggccaggcct agcacatgta cctcacagac caactggcaa gcagccttca gggagctcga 120  
 tccccaaaca gccagtcacc acctctgtcc cctcttcact gttggtcgtc agactgcctg 180  
 agtggacagc aggctggctg cgttgtatatt tcacttcctt cctctgactg gcttgctctt 240  
 gtctctcagt ctttcatccc aggcagctgc ctgaggtagg tgaggaggat ggtgagccag 300  
 gcagggtctac aataaaggca gctctgtccg gctccttctg gctcgtgagt gtcaccggcc 360  
 tggaagactg agggaatggc tcccctctct cctccccgtc tttccccagt tccttccta 420  
 tgttggccca tgtgcccagg gagttggaag catcagggag accctcttag tgtggggaag 480  
 gaagtcagag accattgaca cagtgaagag gcaggatcat gtgttggaag cctgttagca 540  
 ggaccaaggt gactcttggg agagactctt gtggacacag gccgtggtgg cttgtcagac 600  
 cttaaagggt ccaggccac ccctgccagg atccctggtc tgctttctcc aggacacact 660  
 gggacactgc tgagtaatga gcagcttatt acacacaatg ggaagagggg cagagagggc 720  
 tgtgtcgggt gagtctcggc tgggactgaa gtttgccata agtagtggtt gtacatccag 780  
 gagcctggct acctgtcttt accccttgaa ggac 814

<210> 49  
 <211> 1164  
 <212> DNA  
 <213> Murinae gen. sp.

<400> 49  
 ggtcgctatt tcttggtgctg tgacatcacc gagaagatgg acatactggg caccttgaag 60  
 agctgtgggg ctcccaactt ccggcaggtg cggggaggcc tccctgtggt tggcatggga 120



78063.txt

cagcccagcc tcttgggggtt caggaggggtc ctgcagaaac tccagacgga cggactcaag	180
gagtgcatta tcttctgcgt gcgggaggag cctgtggtgt tcttgcgcg c tgaggaggac	240
tttgtgtctt acacacctcg agacaaggag agccttcatg agaacctcag ggaccctagt	300
ccaggggtca aggctgagaa tctggagctg gccatccaga aagagatcca tgactttgcc	360
caattgagag ataatgtgta ccacgtatac cacaacacag aggacctgcg cggggagccg	420
cacaccgtgg ccatccgagg tgaggatggc gtgtgcgtga ccgaggaggt gtttaagcgg	480
ccgctcttcc tgcagcccac ctacagatac caccgcctcc ccttgccaga gcaaggggcc	540
cccctggaag ccagtttga tgcctttgtc agcgttcttc gggagacccc cagccttctg	600
ccactcagag ataaccacgg gcctctgcct gccctcctgt tcagctgcca gtcaggtgta	660
ggcagaacca acctaggcat ggtcctggga accctcgtca tgttccacca cagtaggacc	720
acctcccagc tagaggcagc ctccccgttg gccaaacccc tgcccatgga gcagtttcag	780
gtgatccagg gcttcatctg taaggtgcca caggggaaga aaatggtgga ggaggtggat	840
cgagcgatca gtgcctgtgc agagttgcat gacctgaagg aggaggtcct aaaaaaccag	900
aggaggctgg aaagcttcag gccagagagc cggggacagg aatgtggtag tcagcaagct	960
gtccagcaga gggcgctgtg gagcctggag ctgtacttct atctgctcct atttaactac	1020
tatctgcatg agcagtaccc cctggccttt gccctcagtt tcagtcgatg gctgtgtacc	1080
catcctgagc tgtaccgtct gctggtggag ctgaattcag tggggccctt ggtccctggg	1140
gacctcatcg ccaagggctc cctg	1164

<210> 50  
 <211> 388  
 <212> PRT  
 <213> Murinae gen. sp.

<400> 50

Gly	Arg	Tyr	Phe	Leu	Val	Arg	Asp	Ile	Thr	Glu	Lys	Met	Asp	Ile	Leu
1				5					10					15	

Gly	Thr	Leu	Lys	Ser	Cys	Gly	Ala	Pro	Asn	Phe	Arg	Gln	Val	Arg	Gly
			20					25					30		

Gly	Leu	Pro	Val	Phe	Gly	Met	Gly	Gln	Pro	Ser	Leu	Leu	Gly	Phe	Arg
		35					40					45			

Arg	Val	Leu	Gln	Lys	Leu	Gln	Thr	Asp	Gly	Leu	Lys	Glu	Cys	Ile	Ile
	50					55					60				

Phe	Cys	Val	Arg	Glu	Glu	Pro	Val	Val	Phe	Leu	Arg	Ala	Glu	Glu	Asp
65					70					75					80

## 78063.txt

Phe Val Ser Tyr Thr Pro Arg Asp Lys Glu Ser Leu His Glu Asn Leu  
85 90 95

Arg Asp Pro Ser Pro Gly Val Lys Ala Glu Asn Leu Glu Leu Ala Ile  
100 105 110

Gln Lys Glu Ile His Asp Phe Ala Gln Leu Arg Asp Asn Val Tyr His  
115 120 125

Val Tyr His Asn Thr Glu Asp Leu Arg Gly Glu Pro His Thr Val Ala  
130 135 140

Ile Arg Gly Glu Asp Gly Val Cys Val Thr Glu Glu Val Phe Lys Arg  
145 150 155 160

Pro Leu Phe Leu Gln Pro Thr Tyr Arg Tyr His Arg Leu Pro Leu Pro  
165 170 175

Glu Gln Gly Ala Pro Leu Glu Ala Gln Phe Asp Ala Phe Val Ser Val  
180 185 190

Leu Arg Glu Thr Pro Ser Leu Leu Pro Leu Arg Asp Asn His Gly Pro  
195 200 205

Leu Pro Ala Leu Leu Phe Ser Cys Gln Ser Gly Val Gly Arg Thr Asn  
210 215 220

Leu Gly Met Val Leu Gly Thr Leu Val Met Phe His His Ser Arg Thr  
225 230 235 240

Thr Ser Gln Leu Glu Ala Ala Ser Pro Leu Ala Lys Pro Leu Pro Met  
245 250 255

Glu Gln Phe Gln Val Ile Gln Gly Phe Ile Cys Lys Val Pro Gln Gly  
260 265 270

Lys Lys Met Val Glu Glu Val Asp Arg Ala Ile Ser Ala Cys Ala Glu  
275 280 285

Leu His Asp Leu Lys Glu Glu Val Leu Lys Asn Gln Arg Arg Leu Glu  
290 295 300

Ser Phe Arg Pro Glu Ser Arg Gly Gln Glu Cys Gly Ser Gln Gln Ala  
305 310 315 320

Val Gln Gln Arg Ala Leu Trp Ser Leu Glu Leu Tyr Phe Tyr Leu Leu  
Page 54

Leu Phe Asn Tyr Tyr Leu His Glu Gln Tyr Pro Leu Ala Phe Ala Leu  
340 345 350

Ser Phe Ser Arg Trp Leu Cys Thr His Pro Glu Leu Tyr Arg Leu Leu  
355 360 365

Val Glu Leu Asn Ser Val Gly Pro Leu Val Pro Gly Asp Leu Ile Ala  
370 375 380

Lys Gly Ser Leu  
385

<210> 51  
<211> 4303  
<212> DNA  
<213> Homo sapiens

<400> 51  
ggctgctggc agactatggg tacaacggcc agcacagccc agcagacggt ctcggcaggc 60  
accccatattg agggcctaca gggcagtggc acgatggaca gtcggcactc cgtcagcatc 120  
cactccttcc agagcactag cttgcataac agcaaggcca agtccatcat cccaacaag 180  
gtggcccctg ttgtgatcac gtacaactgc aaggaggagt tccagatcca tgatgagctg 240  
ctcaaggctc attacacgtt gggccggctc tcggacaaca cccctgagca ctacctggtg 300  
caaggccgct acttcctggt gcgggatgtc actgagaaga tggatgtgct gggcaccgtg 360  
ggaagctgtg gggcccccaa cttccggcag gtgcaggggtg ggctcactgt gttcggcatg 420  
ggacagccca gcctctcagg gttcaggcgg gtcctccaga aactccagaa ggacggacat 480  
agggagtgtg tcatcttctg tgtgcgggag gaacctgtgc ttttcctgcg tgcagatgag 540  
gactttgtgt cctacacacc tcgagacaag cagaaccttc atgagaacct ccagggcctt 600  
ggacccgggg tccgggtgga gagcctggag ctggccatcc ggaaagagat ccacgacttt 660  
gcccagctga gcgagaacac ataccatgtg taccataaca ccgaggacct gtgggggggag 720  
ccccatgctg tggccatcca tggtagaggac gacttgcatg tgacggagga ggtgtacaag 780  
cggcccctct tcctgcagcc cacctacagg taccaccgcc tgcccctgcc cgagcaaggg 840  
agtcccctgg agggccagtt ggacgccttt gtcagtgttc tccgggagac cccagcctg 900  
ctgcagctcc gtgatgcca cgggcctccc ccagccctcg tcttcagctg ccagatgggc 960  
gtgggcagga ccaacctggg catggtcctg ggcaccctca tcctgcttca ccgcagtggg 1020  
accacctccc agccagaggc tgccccacg caggccaagc ccctgcctat ggagcagttc 1080  
caggtgatcc agagctttct ccgcatgggt cccaggggaa ggaggatggt ggaagagggtg 1140

## 78063.txt

gacagagcca	tcactgcctg	tgccgagttg	catgacctga	aagaagtggg	cttggaaaac	1200
cagaagaagt	tagaaggtat	ccgaccggag	agcccagccc	agggaaagcgg	cagccgacac	1260
agcgtctggc	agagggcgct	gtggagcctg	gagcgatact	tctacctgat	cctgtttaac	1320
tactaccttc	atgagcagta	cccgtgggcc	tttgccctca	gtttcagccg	ctggctgtgt	1380
gcccaccctg	agctgtaccg	cctgcccgtg	acgctgagct	cagcaggccc	tgtggctccg	1440
agggacctca	tcgccagggg	ctccctacgg	gaggacgatc	tggctctccc	ggacgcgctc	1500
agcactgtca	gagagatgga	tgtggccaac	ttccggcggg	tgccccgcat	gcccattctac	1560
ggcacggccc	agcccagcgc	caaggccctg	gggagcatcc	tggcctacct	gacggacgcc	1620
aagaggaggc	tgcggaaggt	tgtctgggtg	agccttcggg	aggaggccgt	gttggagtgt	1680
gacgggcaca	cctacagcct	gcggtggcct	gggccccctg	tggctcctga	ccagctggag	1740
accctggagg	cccagctgaa	ggcccatcta	agcgagcctc	ccccaggcaa	ggagggcccc	1800
ctgacctaca	ggttccagac	ctgccttacc	atgcaggagg	tcttcagcca	gcaccgcagg	1860
gcctgtcctg	gcctcaccta	ccaccgcata	cccatgccgg	acttctgtgc	cccccgagag	1920
gaggactttg	accagctgct	ggaggccctg	cgggccgccc	tctccaagga	cccaggcact	1980
ggcttcgtgt	tcagctgcct	cagcggccag	ggccgtacca	caactgcgat	ggtgggtggct	2040
gtcctggcct	tctggcacat	ccaaggcttc	cccagaggtg	gtgaggagga	gctcgtgagt	2100
gtgcctgatg	ccaagttcac	taagggtgaa	tttcaggtag	taatgaaggt	ggtgcagctg	2160
ctacccgatg	ggcaccgtgt	gaagaaggag	gtggacgcag	cgctggacac	tgtcagcgag	2220
accatgacgc	ccatgcacta	ccacctgcgg	gagatcatca	tctgcaccta	ccgccaggcg	2280
aaggcagcga	aagaggcgca	agaaatgcgg	aggctgcagc	tgccggagcct	gcagtacttg	2340
gagcgctatg	tctgcctgat	tctcttcaac	gcgtacctcc	acctggagaa	ggccgactcc	2400
tggcagaggc	ccttcagcac	ctggatgcag	gaggtggcat	cgaaggctgg	catctacgag	2460
atccttaacg	agctgggctt	ccccgagctg	gagagcgggg	aggaccagcc	cttctccagg	2520
ctgcgctacc	ggtggcagga	gcagagctgc	agcctcgagc	cctctgcccc	cgaggacttg	2580
ctgtaggggg	ccttactccc	tgtcccccca	cccacagggc	cccacgcagg	cctgggggtgt	2640
ctgaggtgct	cttggctggg	agcggccctg	aggggtgctg	gccttgaaat	gattccccca	2700
cttcctggag	agactgagcg	gagttgggag	cctttttaga	aagaactttt	tataggacag	2760
ggagacagca	cagccatccc	ttgcaaacca	ccaaggtgtg	tggctgacct	ccagggagga	2820
gcactcactg	gagtgtcac	aaggtgcaca	ctgctgtgtg	taccttgag	acaggccggc	2880
gttcagcctc	caaggggctc	actccccag	ttgccaaaca	ctgtggatct	ctctgtcctc	2940
ttctcccctc	tctcagattg	gcctggcagc	ccctggcaca	gagcagaccc	ggccactggt	3000
agctccccac	ttccttactc	ctgctgctct	gccattgccg	ctccccttgt	tgctgcccaa	3060

78063.txt

gcactgccct cgggcgtctg gcagcctgag gtgggtggag gggacagtgt tctggataga 3120  
tctattatgt gaaaggcagc ttcacccagt tttctggact ctcatgcccc catctccgac 3180  
ctgggagact tcaggaatga caacctaccc agcctggtgg ggctggcagg atggtggagg 3240  
tttctcaagg agctggagac ttcagggagc ccctctcatg gggaggaaag agcttccagg 3300  
gggcgaacgc agcacagagg aagaggcctg ctccacttgt ctgggaacct gggcaggagg 3360  
cacagaggaa gccaaggcct ggagctgcag gtcccccggc atctctctct gtcccggcag 3420  
cccaggatgg cctggtgccc ccacctgctg cagcaggagc cccaaggagt gctagctgag 3480  
ggtggttgct ggggtggtcc tcatggacag tgaggtgtgc aagggtgcac tgaggggtggt 3540  
gggaggggat cacctggggt ccaggccatc cttgctgagc atctttgagc ctgccttccg 3600  
gtgggagcag aaaaggccag accctgctga gttagaggct gctgggatcc actgtttcca 3660  
cacagcggga aggctgctgg gaacagggtg cagagaagtg ccatgtttgc gttgagcctt 3720  
gcagctcttc cagctgggga ctggtgcttg ctgaaacca ggagctgaac agtgaggagg 3780  
ctgtccacct tgcttggtc actgggacca ggaaagcctg tctttggtta ggctcgtgta 3840  
cttctgcagg aaaaaaaaaa aaggatgtgt cattggtcat gatatttgaa aaggggagga 3900  
ggccgaagtt gttcccatat atccagtatt ggaaaatatt tgacccccct ggctgaattc 3960  
ttttgcagaa ctactgtgtg tctgttact accttttcag gtttattggt tttatttttg 4020  
catgaattaa gacgttttaa tttctttgca gacaaggctt agatgcggag tcagagatgg 4080  
gactgaatgg ggagggatcc tttgtgttct catggttggc tctgactttc agctgtgttg 4140  
ggaccactgg ctgatcacat cacctctctg cctcagtttc cccatctgta aaatgggaga 4200  
ataatacttg cctacctacc tcacaggggt gttgtgagga ttcatttggt attttttttt 4260  
ttttgtaca gagcttttaa gcattaaaaa cagctaaatg tga 4303

<210> 52  
<211> 861  
<212> PRT  
<213> Homo sapiens

<400> 52

Gly Cys Trp Gln Thr Met Gly Thr Thr Ala Ser Thr Ala Gln Gln Thr  
1 5 10 15

Val Ser Ala Gly Thr Pro Phe Glu Gly Leu Gln Gly Ser Gly Thr Met  
20 25 30

Asp Ser Arg His Ser Val Ser Ile His Ser Phe Gln Ser Thr Ser Leu  
35 40 45

His Asn Ser Lys Ala Lys Ser Ile Ile Pro Asn Lys Val Ala Pro Val  
 50 55 60  
 Val Ile Thr Tyr Asn Cys Lys Glu Glu Phe Gln Ile His Asp Glu Leu  
 65 70 75 80  
 Leu Lys Ala His Tyr Thr Leu Gly Arg Leu Ser Asp Asn Thr Pro Glu  
 85 90 95  
 His Tyr Leu Val Gln Gly Arg Tyr Phe Leu Val Arg Asp Val Thr Glu  
 100 105 110  
 Lys Met Asp Val Leu Gly Thr Val Gly Ser Cys Gly Ala Pro Asn Phe  
 115 120 125  
 Arg Gln Val Gln Gly Gly Leu Thr Val Phe Gly Met Gly Gln Pro Ser  
 130 135 140  
 Leu Ser Gly Phe Arg Arg Val Leu Gln Lys Leu Gln Lys Asp Gly His  
 145 150 155 160  
 Arg Glu Cys Val Ile Phe Cys Val Arg Glu Glu Pro Val Leu Phe Leu  
 165 170 175  
 Arg Ala Asp Glu Asp Phe Val Ser Tyr Thr Pro Arg Asp Lys Gln Asn  
 180 185 190  
 Leu His Glu Asn Leu Gln Gly Leu Gly Pro Gly Val Arg Val Glu Ser  
 195 200 205  
 Leu Glu Leu Ala Ile Arg Lys Glu Ile His Asp Phe Ala Gln Leu Ser  
 210 215 220  
 Glu Asn Thr Tyr His Val Tyr His Asn Thr Glu Asp Leu Trp Gly Glu  
 225 230 235 240  
 Pro His Ala Val Ala Ile His Gly Glu Asp Asp Leu His Val Thr Glu  
 245 250 255  
 Glu Val Tyr Lys Arg Pro Leu Phe Leu Gln Pro Thr Tyr Arg Tyr His  
 260 265 270  
 Arg Leu Pro Leu Pro Glu Gln Gly Ser Pro Leu Glu Ala Gln Leu Asp  
 275 280 285  
 Ala Phe Val Ser Val Leu Arg Glu Thr Pro Ser Leu Leu Gln Leu Arg  
 290 295 300

## 78063.txt

Asp Ala His Gly Pro Pro Ala Leu Val Phe Ser Cys Gln Met Gly  
 305 310 315 320  
 Val Gly Arg Thr Asn Leu Gly Met Val Leu Gly Thr Leu Ile Leu Leu  
 325 330 335  
 His Arg Ser Gly Thr Thr Ser Gln Pro Glu Ala Ala Pro Thr Gln Ala  
 340 345 350  
 Lys Pro Leu Pro Met Glu Gln Phe Gln Val Ile Gln Ser Phe Leu Arg  
 355 360 365  
 Met Val Pro Gln Gly Arg Arg Met Val Glu Glu Val Asp Arg Ala Ile  
 370 375 380  
 Thr Ala Cys Ala Glu Leu His Asp Leu Lys Glu Val Val Leu Glu Asn  
 385 390 400  
 Gln Lys Lys Leu Glu Gly Ile Arg Pro Glu Ser Pro Ala Gln Gly Ser  
 405 410 415  
 Gly Ser Arg His Ser Val Trp Gln Arg Ala Leu Trp Ser Leu Glu Arg  
 420 425 430  
 Tyr Phe Tyr Leu Ile Leu Phe Asn Tyr Tyr Leu His Glu Gln Tyr Pro  
 435 440 445  
 Leu Ala Phe Ala Leu Ser Phe Ser Arg Trp Leu Cys Ala His Pro Glu  
 450 455 460  
 Leu Tyr Arg Leu Pro Val Thr Leu Ser Ser Ala Gly Pro Val Ala Pro  
 465 470 475 480  
 Arg Asp Leu Ile Ala Arg Gly Ser Leu Arg Glu Asp Asp Leu Val Ser  
 485 490 495  
 Pro Asp Ala Leu Ser Thr Val Arg Glu Met Asp Val Ala Asn Phe Arg  
 500 505 510  
 Arg Val Pro Arg Met Pro Ile Tyr Gly Thr Ala Gln Pro Ser Ala Lys  
 515 520 525  
 Ala Leu Gly Ser Ile Leu Ala Tyr Leu Thr Asp Ala Lys Arg Arg Leu  
 530 535 540  
 Arg Lys Val Val Trp Val Ser Leu Arg Glu Glu Ala Val Leu Glu Cys  
 545 550 555 560



78063.txt

Asp Gly His Thr Tyr Ser Leu Arg Trp Pro Gly Pro Pro Val Ala Pro  
565 570 575

Asp Gln Leu Glu Thr Leu Glu Ala Gln Leu Lys Ala His Leu Ser Glu  
580 585 590

Pro Pro Pro Gly Lys Glu Gly Pro Leu Thr Tyr Arg Phe Gln Thr Cys  
595 600 605

Leu Thr Met Gln Glu Val Phe Ser Gln His Arg Arg Ala Cys Pro Gly  
610 615 620

Leu Thr Tyr His Arg Ile Pro Met Pro Asp Phe Cys Ala Pro Arg Glu  
625 630 635 640

Glu Asp Phe Asp Gln Leu Leu Glu Ala Leu Arg Ala Ala Leu Ser Lys  
645 650 655

Asp Pro Gly Thr Gly Phe Val Phe Ser Cys Leu Ser Gly Gln Gly Arg  
660 665 670

Thr Thr Thr Ala Met Val Val Ala Val Leu Ala Phe Trp His Ile Gln  
675 680 685

Gly Phe Pro Glu Val Gly Glu Glu Glu Leu Val Ser Val Pro Asp Ala  
690 695 700

Lys Phe Thr Lys Gly Glu Phe Gln Val Val Met Lys Val Val Gln Leu  
705 710 715 720

Leu Pro Asp Gly His Arg Val Lys Lys Glu Val Asp Ala Ala Leu Asp  
725 730 735

Thr Val Ser Glu Thr Met Thr Pro Met His Tyr His Leu Arg Glu Ile  
740 745 750

Ile Ile Cys Thr Tyr Arg Gln Ala Lys Ala Ala Lys Glu Ala Gln Glu  
755 760 765

Met Arg Arg Leu Gln Leu Arg Ser Leu Gln Tyr Leu Glu Arg Tyr Val  
770 775 780

Cys Leu Ile Leu Phe Asn Ala Tyr Leu His Leu Glu Lys Ala Asp Ser  
785 790 795 800

Trp Gln Arg Pro Phe Ser Thr Trp Met Gln Glu Val Ala Ser Lys Ala  
Page 60



805

78063.txt  
810

815

Gly Ile Tyr Glu Ile Leu Asn Glu Leu Gly Phe Pro Glu Leu Glu Ser  
820 825 830

Gly Glu Asp Gln Pro Phe Ser Arg Leu Arg Tyr Arg Trp Gln Glu Gln  
835 840 845

Ser Cys Ser Leu Glu Pro Ser Ala Pro Glu Asp Leu Leu  
850 855 860